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ABSTRACT

A program of mathematics instruction for grade one is provided in this curriculum guide. The teaching goal of each lesson is stated in the Purpose section. Visual aids and manipulative materials useful in developing each lesson are suggested and additional teaching aids are listed. Suggestions for teaching the lessons are separated into three distinct categories: Prebook Activities, Using the Page, and Postbook Activities. Selected activities that provide greater challenge for those pupils who excel are included. Each unit concludes with a self-evaluation page entitled Checkup Time. Additional reviews and tests are also written for each unit. Topics covered are: elementary number concepts; sets and one-to-one matching; cardinal numbers and numerals 0-9; addition and subtraction combinations through nine; simple concepts of fractions; measurement and geometrical concepts; operations with tens; measurement and number patterns; and some addition and subtraction using place value. A time budget chart lists the recommended pace for completion of the proposed curriculum. (JP)

DE SOTO PARISH CURRICULUM GUIDE

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DESOTO PARISH CURRICULUM GUIDE

Mathematics Program

for

Grade 1

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General Objectives

1. To develop an understanding of the meaning of numbers.
2. To acquire an association of numerals with numbers.
3. To acquire the ability to write numerals correctly.
4. To assist the child to move from concrete to semi-concrete and abstract thinking.
5. To develop the ability to discover ideas and see relationships.
6. To develop a basic understanding of the characteristics of geometric figures.
7. To acquire a general knowledge of mathematical terminology and signs.
8. To become acquainted with standard units of measurement, including time and money.
9. To help pupils develop the concept of the fractional numbers one-half, one-third, and one-fourth.
10. To provide introduction and practice in the addition and subtraction combinations through ten.
11. To introduce the properties of mathematics.
12. To develop an understanding of the tens concept.
13. To help pupils extend the concept of addition through the use of expanded notation.
14. To introduce addition and subtraction beyond ten.

Introduction to the Guide

These plans are designed primarily as suggestions to teachers for mathematical instruction in Grade One. It is not the purpose to discourage originality or creativity on the part of the individual teacher in her classroom. The teaching goal of each lesson is clearly stated in the Purpose.

Visual aids and manipulative materials useful in developing each lesson are suggested. Additional Teaching Aids are listed. There are still other good ones that have not been included. Try the ones you know when applicable.

Suggestions for teaching the lessons are separated into three distinct categories: Prebook Activities, Using the Page, and Postbook Activities. Selected activities that provide greater challenge for those pupils who excel are included. In grade 1 the teacher should allow a few minutes reviewing the previous lesson and correlating material. She should cover at least nine pages a week.

Each unit concludes with a self-evaluation page entitled Checkup Time. Additional Reviews and Tests are included. These pages help the pupil and the teacher determine the learning achievement for the unit and readiness for more nature concepts and skills.

Topics and Sub-Topics

Primer

A. Introductory Readiness Activities
    1. Larger and smaller
    2. Longer and shorter
    3. Longest and shortest
    4. Taller and shorter
    5. Identification of circles
    6. Identification of squares
    7. Identification of triangles
    8. Recognition of equivalent sets

B. Meaning of One
    1. Recognition of sets or groups of one
    2. One-by-one matching with smaller sets; larger sets; smaller and larger sets

C. Meaning of Two
    1. Recognition of sets or groups of two
    2. Identifying sets or groups by number
    3. Recognition of numerals and numbers
    4. The natural order of numbers
    5. Comparing sets or groups
    6. Adding or subtracting to make equivalent sets

D. Meaning of Three
    1. Recognition of sets or groups of three
    2. Identifying sets or groups by number
    3. Recognition of numerals and numbers
    4. The natural order of numbers
    5. Comparing sets or groups
    6. Adding or subtracting to make equivalent sets

E. Meaning of Four
    1. Identifying sets or groups by number
    2. Recognition of numerals and numbers
    3. Comparing sets or groups
    4. Adding to match sets and numbers
    5. Addition combinations of 4
    6. Subtraction combinations of 4

F. Meaning of Five
    1. Identifying sets or groups by number
    2. Recognition of numerals and numbers
    3. Comparing sets or groups
    4. Adding or subtracting to match sets and numbers
    5. Natural order of numbers

G. Meaning of Six

H. Meaning of Seven

I. Meaning of Eight

J. Meaning of Nine

K. Meaning of Ten
   1. Identifying sets or groups by number
   2. Natural order of numbers

Book I

M. Sets and One-to-One Matching
   1. Sets of objects
   2. Geometric shapes
   3. Identification of sets
   4. One-to-one matching
   5. Non-equivalent sets
   6. Sets having the same number

N. Cardinal Numbers and Numerals 0-9
   1. Number one and numeral 1; two and 2; three and 3; four and 4; number, number word, and numeral
   2. Natural order of numbers
   3. Subsets
   4. Number, number word, and numerals for 5, 6, 7, 8, and 9
   5. Natural order of numbers
   6. Number zero and numeral 0

O. Addition and Subtraction Combinations Through Five
   1. Joining sets
   2. Numerals for three
   3. Using the equal sign
   4. Joining and separating sets
   5. Solving equations
   6. Combinations of four
   7. Combinations of five
   8. Zero in addition and subtraction

P. Addition and Subtraction Combinations through nine
   1. Combinations of six
   2. Combinations of seven
   3. Combinations of eight
   4. Combinations of nine
   5. Solving equations

Q. Fractional Numbers and Fractions
   1. Fractional number one-half and fraction 1/2
   2. Fractional number one-third and fraction 1/3
   3. Fractional number one-fourth and fraction 1/4

R. Measurement and Geometry
   1. Money--penny and nickel
   2. Liquid measure
   3. Points and line segments
   4. Linear measure - inch
   5. Geometric figures - rectangles, squares, circle

S. The Tens Concept
   1. One-to-one matching
   2. The counting man
   3. The number ten
   4. The memory man
   5. Numeral ten; 11 and 12; 13 and 14
   6. A number line
   7. Number and numeral 15 and 16; 17 and 18; 19
   8. Place value
   9. Number twenty and numeral 20; 20 through 29
   10. Multiples of ten
   11. Natural order of numbers 30 through 39; 40 through 50; 51 through 60; 70 through 79; through 99
   12. Natural order of numbers

T. Addition and Subtraction Combinations of Ten
   1. Number squares
   2. Sums of ten
   3. Addition combinations of ten
   4. Subtraction combinations of ten
   5. Solving equations

U. The Use of Ten in Addition and Subtraction
   1. The sum of three numbers
   2. Using ten in addition
   3. Making sets of ten
   4. Do and undo--inverse operations

V. Addition and Subtraction Beyond Ten
   1. Finding sums
   2. Using expanded notation
   3. Using place value in addition and subtraction
   4. Column addition and subtraction
   5. Word problems

W. Measurements and Number Patterns
   1. Using money
   2. Telling time
   3. Geometric figures
   4. Patterns with geometric figures
   5. Number sequences
   6. Finding sums
   7. Magic squares
   8. Naming numbers

Time Budget Chart

Week:	Lessons to be Taught	Comments
1st Six Weeks	Lesson Numbers	
1	1-8	Combine (2,3), (4,5), (6,7)
2	5-10	(9,10), (11,12), (13,14), (15,16)
3	17-24	(17,18), (20,21), (23,24)
4	25-32	(25,26), (27,28), (30,31)
5	33-40	(34,35), (37,38), (39,40)
6	41-48	(41,42), (43,44), (47,48)
2nd Six Weeks		
7	49-57	(49,50), (51,52), (53,54)
8	57-64	(57,58), (59,60), (61,62)
9	65-72	(67,68), (69,70), (71,72)
10	73-81	(74,75), (76,77,78), (79,80)
11	82-89	(82,83), (86,87), (88,89)
12	90-98	(92,93,94), (95,96), (97,98)
3rd Six Weeks		
13	99-106	(99,100), (102,103), (105,106)
14	107-114	(107,108), (111,112), (113,114)
15	115-123	(115,116), (117,118), (120,121), (122,123)
16	124-131	(126,127), (128,129), (130,131)
17	132-139	(132,133), (134,135), (136,137)
18	140-147	(141,142), (144,145), (146,147)
4th Six Weeks		
19	148-154	(150,151), (153,154)
20	155-161	(155,156), (158,159)
21	162-168	(162,163), (165,166), (167,168)
22	169-178	(169,170), (172,173), (174,175) (176,177,178)
23	179-189	(179,180,181), (182,183), (184,185), (186,187), (188,189)
24	190-195	(192,193)
5th Six Weeks		
25	196-204	(196,197), (199,200), (201,202), (203,204)
26	205-211	(206,207), (210,211)
27	212-219	(212,213), (214,215), (216,217)
28	220-228	(220,221), (223,224), (225,226), (227,228)
29	229-235	(229,230), (233,234)
30	236-242	(237,238), (241,242)

6th Six Weeks

31	243-249	(243,244), (245,246)
32	250-257	(250,251), (253,254), (255,256)
33	258-265	(259,260), (261,262), (263,264)
34	266-273	(267,268), (270,271), (272,273)
35	274-278	
36	279-281	

General Suggestions for the Teacher

1. Be sure each child understands his mistakes. Provide time to review and correct papers.

2. Find time to help the weaker students individually.

3. Make sure the more capable are challenged through interesting and meaningful enrichment activities.

4. Try to make arithmetic enjoyable to the pupils.

5. Involve them as quickly as possible in the lesson explanations.

6. Associate arithmetic closely to real life situations whenever possible. Plan for these opportunities.

7. Plan for a discovery approach to new concepts; don't "spoon-feed" them too much.

8. Emphasis should be on discovery and understanding of ideas before mastery of facts is expected.

9. Help the children experience feelings of success. Never give more practice than they can reasonably complete.

10. Provide for creative thinking.

11. Be familiar with the Mathematical Background of lessons to be planned.

12. Some of the Prebook Activities may be omitted when understanding seems adequate.

13. When time becomes an overwhelming factor, some of the Postbook Activities and Reviews may also be considered optional if concepts do not particularly need strengthening.

Teaching Aids

1. Flannel board and cutouts for number concepts and for set demonstrations
2. Number line for addition and subtraction
3. Pocket chart (shows one, ten, and one hundred)
4. Individual sets of counters (for understanding number, addition, and subtraction)
5. Counting men
6. Rulers - measurement, construction
7. Flash cards
8. Yarn - for set demonstrations
9. Colored chalk and crayons
10. Counting frames for counting, adding, and subtracting
11. Geometric cutouts
12. Art paper
13. Clocks
14. Play money
15. Counting sticks to make bundles of ten
16. Picture cards for number, numerals and words through ten
17. Bingo - for reading and recognizing numerals by name
18. Concrete objects for set demonstration and counting purposes
19. Transparencies and overhead projector

Transparency List

1. Identifying sets (Primer pages 25, 53, 79, 99, and 125)
   Book I pages 4-5
2. Using the ones counting man (pages 97-98)
3. Transferring the tens on the counting man(pages 99-101)
4. Using the addition table (page 76)
5. Measurements - time line or measurements (pages 88-89)
6. Shapes - circles, squares, triangles, rectangles (pages 92-94)
7. Using the subtraction table (page 155)
8. Number line (pages 104-105)
9. Place Value - 11-19 (page 110)
   Place Value - 21-29 (pages 113-114)
10. Comparisons -
    a. larger-smaller (pages 1-2)
    b. tall, taller, tallest
    c. longer, shorter
    d. longest, shortest
11. Equivalent sets:
    a. page 6 as suggested in Mathematical Learnings and Aids to Learning
    b. page 8 in Mathematical Learnings and Follow-Up Activities 3
12. One-by-one matching with larger sets (page 17)
13. One-by-one matching with smaller sets (page 15)
14. Identifying sets (pages 53 and 79)

Grade Level 1

Lesson No. 1

Text Pages 1-2

Lesson Topic: Larger, Smaller

Materials needed: Toys of different sizes

Purposes: To teach the children the meaning of comparative size terms: larger and smaller

Procedures:

I. Prebook Activities
Display the toys and compare two at a time, using the terms larger and smaller. Have the children take turns choosing two toys to compare and talk about. Point out that, although one ball, for instance, is smaller than the second ball, it can also be larger than the third ball.

II. Teaching the page
Display a copy of textbook and discuss with the children the picture on the cover. Give each child a book on which his name has been written. Allow plenty of time for the children to look through their new books, having them turn to page 1. Help them find the first box. Say, "Do you see the toy truck? Use your crayon to draw a ring around the larger truck."

III. Demonstrate
In the second box direct the children to draw a ring around the smaller bear. Continue having them draw a ring around the smaller beach toy, the larger ball, the larger stuffed animal, and the smaller book.

IV. Be sure to check on each pupil to see if he is following directions given in drawing rings around the object named as to smaller or larger.

Suggestions for the teacher:

The teacher may use the following activities:

1. Books to enjoy, dealing with comparative size:
The Very Little Girl by Phyllis Drasilorsky; Doubleday, 1953, and Let's Find Out What's Big and What's Small by Charles and Martha Shapp: F. Watts, 1959.
2. Use the pupils' page in textbook for creative activity to show larger and smaller.

Grade Level 1

Lesson No. 2

Text Pages 3-4

Lesson Topic: Identification of Circles

Materials needed: Flannel board, felt circles of various size and color,
felt cutouts which are not circular

Purposes: To teach the children to identify circles

Procedures:

I. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Be sure to discuss the shape, using such terms as round and circular.
   C. Display and discuss circles which differ in both color and size.
   D. Allow the circles to reamin on display.

II. Teaching the page
   A. Help each child turn to page 3 in his book.
   B. Read the directions aloud.
   C. Keep in mind that it is the understanding of the concept of circle that is being developed.
   D. Check the work.

Suggestions for the teacher:

Enrichment Activities

Use Follow-up Activities as suggested on page 2, if time allows.

Grade Level 1

Lesson No. 3

Text Pages 5-6

Lesson Topic: Recognition of Circular Shapes

Materials needed: Several circles cut from constraction paper concrete objects which contain circles magazine pictures which contain circles

Purposes: To teach the recognition of circular shapes in a functional setting as well as in isolation

Procedures:

I. Prebook Activities
   - A. Follow Prebook Activities very closely.
   - B. Display a large circle and have it identified.
   - C. Have children find circles in objects around the room.

II. Teaching the page
   - A. Have children open their books to page 5.
   - B. Allow a few minutes for discussion.
   - C. Read the directions aloud and clearly.
   - D. Repeat the directions and encourage the children to complete the page independently if they are able.
   - E. Check to see if the children are following directions given.
   - F. Check the work.

Suggestions for the teacher:

Enrichment Activities: Use follow-up activities as suggested on page 4, in Teachers' Edition, if time allows.
Coins and frizbees would be helpful to have in the classroom at this time.

Grade Level 1

Lesson No. 4

Text Pages 7-8

Lesson Topic: One-by-One Matching

Materials needed: Sets of concrete objects in equivalent pairs, especially toy cups and saucers

Purposes: To introduce the arithmetic term: "equal in number"

Procedures:

I. Prebook Activities (p. 6)
   A. Display a set of toy cups and an equal set of toy saucers. Ask: Do you think there are as many cups as there are saucers?
   B. Allow pupils to match each cup and saucer.
   C. Explain that the process is called one-by-one matching.
   D. Repeat this procedure with other pairs of equal sets of concrete objects.

II. Teaching the page
   A. Study page 7 and discuss.
   B. Call attention to the details in the picture by asking specific questions such as, "What will the children have to eat? How will they drink their milk?"
   C. Direct the children to look at the lower half of the page. Say, "I wonder if there is a party favor for each one of the children?" "How can we match the children and favors?" (by drawing a line from each child to one of the party favors)
   D. Direct children to draw lines to find out if there is a straw for each carton of milk.

III. Use Follow-up Activities on page T6.

Suggestions for the teacher:

Grade Level 1

Lesson No. 5

Text Pages 9-10

Lesson Topic: Equivalent Sets One-by-One Matching with Equivalent Sets

Materials needed: Flannel board, several sets of felt cutouts

Purposes: To provide practice in one-by-one matching of equivalent sets of groups

Procedures:

- I. Prebook Activities
  - A. Follow Prebook Activities very closely
  - B. Display two equivalent sets of the felt cutouts (the circle sets will be fine).
- II. Teaching the page
  - A. Have children open their books to page 9.
  - B. Let the children discuss the pictures.
  - C. Read the directions aloud.
  - D. Circulate among the children to help those who may be having trouble.
  - E. Check the work.
- III. Enrichment Activities
  Use follow-up activities as suggested on page 8 in Teachers' Edition, if time allows.

Suggestions for the teacher:
Special attention needs to be devoted to the slower learners in the follow-up activities. Handling and matching equivalent sets of concrete objects such as softballs and bats may be helpful. Matching a group of students and a row of desks may also be meaningful. Explain that a group of students is a "set of students" and a row of desks is a "set of desks."
The terms matching, one-by-one, and set should be strongly emphasized.

Grade Level 1

Lesson No. 6

Text Pages 11-12

Lesson Topic: Meaning of One

Materials needed: Flannel board one each of a variety of felt cutouts and numeral 1

Purposes: To help children understand the meaning and associate the number with numeral

Procedures:

I. Prebook Activities
  A. Display variety of sets of 1 cutouts.
  B. Have children match sets to show equivalence.
  C. Ask name of number. (One is the name of the number.)
  D. Write 1 on the board. Display felt cutout 1 and ask who knows the name.
  E. Place numeral under set. Repeat for each set.

II. Using the page (11)
  A. Direct attention to number of each picture at top.
  B. Direct attention to numeral name at bottom of page (cont'd on back) and to circle each set of one.
  C. Now "name" each set by drawing a line from the numeral one to each set of one.

III. Extra practice

Suggestions for the teacher:

a. Begin construction of large number chart, using numeral and number one (1-*).

b. Seatwork children write numeral one and draw set of one.

Grade Level 1

Lesson No. 7

Text Pages 13-14

Lesson Topic: Recognition of Sets, or Group of 1

Materials needed: 1. Felt cutouts for sets of one and more than one

2. Numeral 1

Purposes: 1. To give practice in recognition of sets of one

2. To associate the numeral with number of the set of one

Procedures:

I. Prebook Activities
   A. Place felt numeral 1 on flannel board and have children (identify) associate with set and say the number of the set is ______.
   B. Place more than one and have children conclude the number of the set is not "one."
   C. Draw a line from numeral to each set of one. Omit sets not containing one.

II. Using the page
   A. Direct attention to numeral and name it.
   B. Circle each set containing the number named by the numeral.
   C. "Name" each set by drawing a line from the numeral to each set containing the number named by the numeral.
   D. Check to see that each child understand the directions. (can be done personally, or by pupil "helpers")

III. Extra Practice
   A. Have children select magazine pictures showing sets of one, and paste them on a chart on which is written a large numeral one.
   B. Clap and let them stand or raise hands each time they hear 1.
   C. Clap and let them write numeral 1 on paper each time they hear "one".

Suggestions for the teacher:

Grade Level 1

Lesson No. 8

Text Pages 15-16

Lesson Topic: One-by-One Matching with Smaller Sets

Materials needed: Flannel board, equivalent sets of felt cutouts

Purposes: To teach the children to add to the smaller set in order, to make it match the set to which it is compared

Procedures:

I. Prebook Activities
   Arrange two equivalent sets of felt cutouts on the flannel board. Have them matched one-by-one to determine whether one set has as many as the other.
   A. Arrange on the flannel board two sets which are not equivalent. (6 trees and 5 birds) Introduce the term non-equivalent.
   B. Be sure you have an extra bird which can be added to the smaller set.

II. Teaching the page
   Have children open their books to page 15.
   A. Discuss each picture fully.
   B. Read the discussion.

III. The first procedure of the lesson should be a review of terms: one-by-one, equivalent, set, number, and numeral.

Suggestions for the teacher:

Evaluate by checking and giving individual help to the children that need it. As specific difficulties are observed, make note of them and record the name of the children that are having difficulty. This information will help meet the specific needs of individuals or small groups of children.

Grade Level 1

Lesson No. 9

Text Pages 17-18

Lesson Topic: One-by-One Matching with Larger Sets

Materials needed: Flannel board, several sets of felt cutouts

Purposes: To teach the children to take away or subtract from the larger set in order to make it match the set to which it is compared

Procedures:

I. Prebook Activities
   Arrange on the flannel board two sets of felt cutouts which are not equivalent, 6 ducks and 7 stars. Have two children match the sets one-by-one.
   Help the children discover that if one star is removed, or taken away, the sets can be matched exactly.

II. Teaching the page
   A. Have the children open their books to page 17. Direct their attention to the first row of pictures.
   B. After a brief demonstration let them continue the page alone.

Suggestions for the teacher:

1. Have the children draw pairs of sets with one more object in one set than in the other.
2. Remind the children, if they try to match eight cups with seven saucers they have one cup too many and should take it away.

A meaningful activity here would be to illustrate what would happen if one student would be absent from school that day. One desk will be empty. In order for every desk in the room to be occupied that desk would have to be removed from the classroom.

Grade Level 1

Lesson No. 10

Text Pages 19-20

Lesson Topic: One-by-One Matching with Samller and Larger Sets

Materials needed: Flannel board

Several sets of felt cutouts

Purposes: To provide additional practice in adding to the smaller set or taking away from the larger set in order to make two sets equivalent

Procedures:

I. Prebook Activities

Arrange two sets containing different numbers of felt cutouts on the flannel board. Have the sets matched one-by-one to determine if they are equivalent.

A. Place 4 chairs at the front of the room without naming the number of chairs. Then display a set of 4 books without naming the number.

B. Develop the idea that a book can be placed on each chair to see if there are as many books as chairs.

II. Teaching the page

A. Have the children turn to page 19 in their textbooks.

B. Have the children discuss the pictures on this page. Point out that the pictures are not in rows.

C. Give individual help where needed.

D. Check the work page.

Suggestions for the teacher:

1. Evaluate by checking each pupil's work to see if he needs further experience with the concept of sets being equal in number. If some pupils need further experience, have them take turns in collecting a set of crayons, pencils, books or other objects.
2. Give the pupils plenty of opportunity to try to show how the members of the sets he brought can be matched one-to-one with the members of the other set.

Grade Level 1

Lesson No. 11

Text Pages 21-22

Lesson Topic: Meaning of 2

Materials needed: Flannel board, two each of a variety of felt cutouts
Felt cutout numeral 2

Purposes: To help the children understand the meaning of two and to associate the number idea with the numeral 2

Procedures:
I. Prebook Activities
  A. Arrange several sets, each containing 1 felt cutout, on the flannel board.
  B. Have the children give the number (one) of each set in turn.
  C. Add one more cutout to each of the sets, discussing each addition you make.
  D. Write the numeral 2 on the board. Say, "Does anyone know how to read this numeral."
  E. Encourage the children to suggest the name two.
II. Teaching the page
  A. Direct the children to look at the picture on page 21.
  B. Allow plenty of time for a good discussion of the situation pictured.
  C. Help focus the children's attention on the details of the picture by asking questions.

Suggestions for the teacher:

Enrichment Activities:
1. Add the numeral two to your number chart.
2. If time allows, let the children dramatize the song "Two Little Kitty-Cats".
3. Use page 22 by having each child look at the numeral 2 and then having him draw that many pictures.

Grade Level 1

Lesson No. 12

Text Pages 23-24

Lesson Topic: Recognition of Sets or Groups of 2

Materials needed: Flannel board, felt cutouts in sets of 1 and 2, felt cutout numeral 2

Purposes: To give children practice in the recognition of sets containing 2 objects

To recognize and associate numeral 2 with cutout

Procedures:

- I. Prebook Activities
  - A. Follow Prebook Activities very closely p. 22, letting children take turns identifying sets of 2, and drawing a line from the set to the numeral.
  - B. Let children take turns writing the numeral for the number of set 2.
- II. Teaching the page
  - A. Find page (write 23) on board.
  - B. Read or follow directions given on page 22.
- III. Follow-up Activities
  - A. On tablet or art paper have children draw a set of 2, and on the backs of paper practice writing the numeral.
  - B. Follow-up Activities 2, page 22, 3, page 22.

Suggestions for the teacher:

For children that have been to kindergarten, prebook activities may be omitted.

Grade Level 1

Lesson No. 13

Text Pages 25-26

Lesson Topic: Identifying Sets of Groups by Number

Materials needed: Concrete object sets of one and two, number cards 1 and 2 (See page 24)

Purposes: To strengthen understanding of numbers one and two; to reinforce association of numerals 1 and 2 with numbers one and two

Procedures:

I. Follow Prebook Activities carefully using concrete objects and number cards, page 24.

II. Teaching the page
  - A. Place numeral 25 on chalkboard and direct children to find page 25, being careful to turn pages correctly.
  - B. Direct children as described under teaching the page 24.
  - C. Check to see that directions have been followed.

III. Follow-up Activities
  - A. Additional duplicated sheets identifying sets (1 & 2) by number
  - B. Follow-up activity 3, page 24

Suggestions for the teacher:

Prebook Activities may be brief or possibly omitted with kindergarten pupils, as teacher may decide.

Grade Level 1

Lesson No. 14

Text Pages 27-28

Lesson Topic: Recognition of Numerals and Numbers

Materials needed: A variety of concrete objects in sets of one and two

Number card 1 and 2

Purposes: To help the children develop the ability to recognize numerals 1 and 2 and associate them with the numbers of corresponding sets of one and two

Procedures:

I. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Ask questions about the numerals.
   C. Encourage a volunteer to choose one of the numerals and hold it up near the number card and point out that the numeral tells how many are in the set.

II. Teaching the page
   A. Have the children turn to page 27 in their book.
   B. Discuss the pictures on the page.
   C. Give individual help where needed.
   D. Check each child's page.

Suggestions for the teacher:

Enrichment Activities:
Use Follow-up Activities as suggested on page 26 in Teacher's Edition.

Grade Level 1

Lesson No. 15

Text Pages 29-30

Lesson Topic: Comparing Sets or Groups of 1 and 2

Materials needed: No special materials required

Purposes: To begin the transition from the use of one-by-one matching to the use of numbers as a means of comparing sets or groups

Procedures:

I. Prebook Activities
   A. Follow Prebook Activities very closely in Teacher's Edition page 28.
   B. Ask the children several questions. The questions should be structured to provide better understanding of: one is one less than or smaller than two; two is one more than or larger than one.

II. Teaching the page
   A. Ask the children to open their books to page 29.
   B. After they have had a few minutes to relate their own experiences with different kinds of hats and helmets, direct their attention to the first row.
   C. Continue to read the pictures, bringing out points about helmets and the set of boys.

Suggestions for the teacher:

Enrichment Activities:

Use Follow-up Activities suggested on page 28 in Teacher's Edition.

Grade Level 1

Lesson No. 16

Text Pages 31-32

Lesson Topic: Recognition of Equivalent Sets

Materials needed: Felt cutouts in sets of one and two

Felt cutout numerals 1 and 2

Purposes: To review the properties of equivalent sets

To teach the children to use the numbers of sets rather than one-by-one matching as a means of recognizing equivalent sets

Procedures:

I. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Make display on flannel board as suggested.
   C. Proceed with suggested questions.

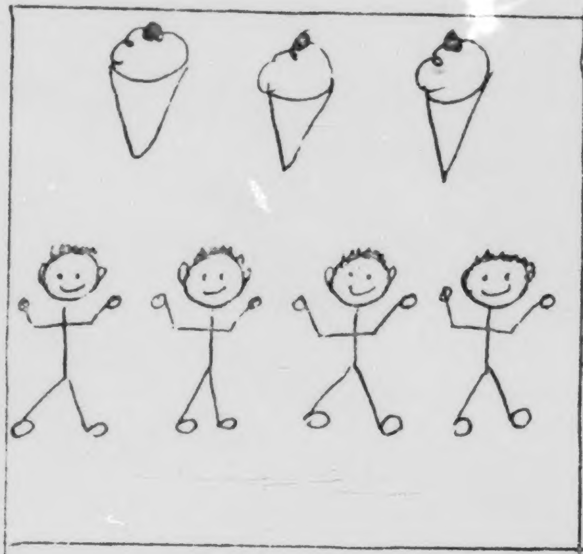
II. Teaching the page
   A. Have the children locate page 31.
   B. Read the direction to the class.
   C. Check each child's page.
   D. Ask a few oral questions. This will let you know whether he really understands the word.

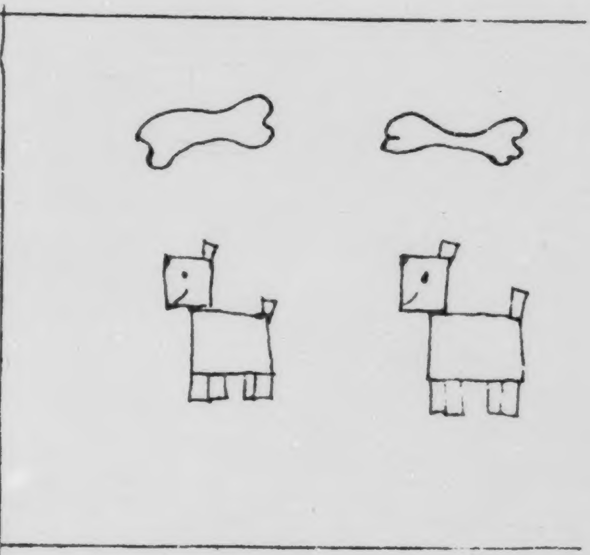
Suggestions for the teacher:

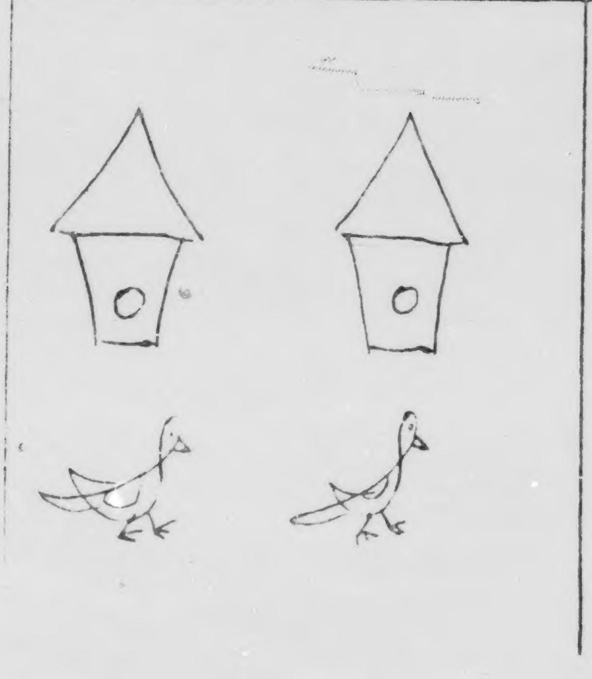
Enrichment Activities:
Use the Follow-up Activities as suggested on page 30 in Teacher's Edition.
Use the work sheet to check for understanding.

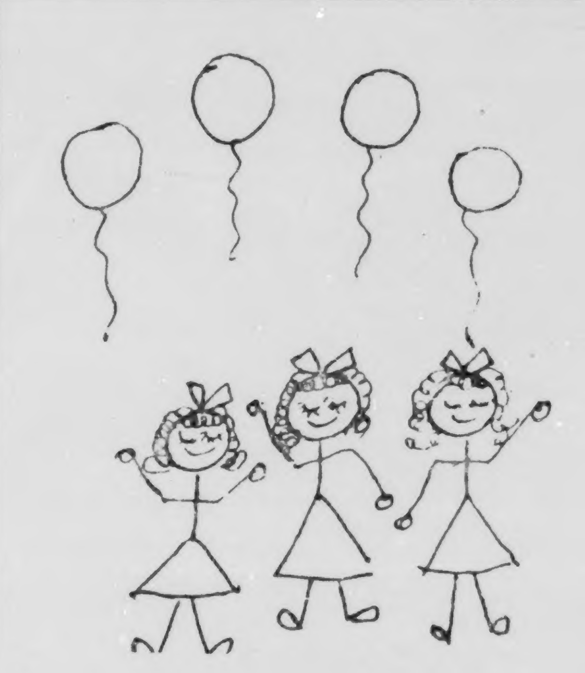
Evaluation: 27

Draw a ring around each box containing equivalent sets. (Use matching lines to find out.)









Grade Level 1

Lesson No. 17

Text Pages 33-34

Lesson Topic: Adding to Make Equivalent Sets

Materials needed: Flannel board

A variety of felt cutouts

Purposes: To show that one more must be added to a given set of one to make a set which will be equivalent to a set of two

Procedures:

I. Prebook Activities
   A. Follow the above activities very closely.
   B. Read the complete pre-activities.
   C. Repeat several times using different objects.

II. Teaching the page
   A. Have children find page 33.
   B. Read the directions.
   C. Check each child's page.

Suggestions for the teacher:

Enrichment Activities:

Use Follow-up Activities as suggested on page 32 in Teachers' Edition.

Grade Level 1

Lesson No. 18

Text Pages 35-36

Lesson Topic: Adding to Match Sets and Numbers

Materials needed: Flannel board, felt cutouts in sets of two
Felt numerals 2

Purposes: To show that one more must be added to a given set of one in order to make a set which will have the number two To provide informal experience in the handling of the addition combination of two

Procedures:

I. Prebook Activities
   A. Place the cutout numeral two on the board and have it identified.
   B. Say, "This numeral tells us we want a set which has the number two."
   C. Repeat with different cutouts.
   D. Have the children take turns in adding the cutouts.
II. Teaching the page
   A. Have the children turn to page 35.
   B. Direct their attention to the boxes.
   C. Read the directions.
   D. Check each child's work.
   E. Encourage the pupils to work independently.

Suggestions for the teacher:
Enrichment Activities:
Use Follow-up Activities that are suggested in Teacher's Edition.

Grade Level 1

Lesson No. 19

Text Pages 37-38

Lesson Topic: Addition Combination of 2

Materials needed: Three paper cups or plastic containers, a variety of small concrete objects

Purposes: To teach the addition combination that 1 plus 1 more equals 2

Procedures:

- I. Prebook Activities
    - A. Follow Prebook Activities closely.
    - B. Ask the children several questions.
    - C. Point out that no matter what the nature of the objects in the sets are, one and one are two.
- II. Teaching the page
    - A. Have the children turn to page 37.
    - B. Each row of pictures should be used to demonstrate the addition combination 1 plus 1 equals 2.
    - C. Encourage the children to ask questions about the pictures.

Suggestions for the teacher:

Enrichment Activities:

Use Follow-up Activities on page 36 in Teacher's Edition.

If time allows, give the children an opportunity to create their own picture stories or demonstrate that one and one are two.

Grade Level 1

Lesson No. 20

Text Pages 39-40

Lesson Topic: Subtracting to Make Equivalent Sets

Materials needed: Flannel board

A variety of felt cutouts in sets of one and two

Purposes: To show that one must be taken away from a given set of two in order to make a set which will be equivalent to a set of one

Procedures:

I. Prebook Activities
    A. Follow Prebook Activities very closely.
    B. Read the procedure several times using different objects in each set.
II. Teaching the page
    A. Have the children open their books to page 39.
    B. Direct their attention to the boxes.
    C. Read the directions.
    D. Check each child's page.

Suggestions for the teacher:

Enrichment Activities
Use the Follow-up Activities as suggested on page 38 in Teacher's Edition.

Grade Level 1

Lesson No. 21

Text Pages 41-42

Lesson Topic: Subtracting to Match Sets and Numbers

Materials needed: Flannel board, Felt cutouts in sets of two

Felt numerals 1

Purposes: To show that one must be taken away from a given set of two in order to make a set which will have the number one To provide informal experience in handling the subtraction combination of two

Procedures:

I. Prebook Activities
   A. Place the felt numeral 1 on the board and have it identified.
   B. Put two cutouts on the board and ask, "Does this set of ducks have the number one?"
   C. Ask, "How can we make a set which will have the number one?" (Take one duck away)
   D. Repeat this procedure with different felt cutouts, discussing each situation fully.

II. Teaching the page
   A. Have children turn to page 41.
   B. Direct their attention to the boxes.
   C. Read the directions aloud and clearly.
   D. Ask a few oral questions.

Suggestions for the teacher:

Enrichment Activities
Use Follow-up Activities as suggested in Teacher's Edition.

Grade Level 1

Lesson No. 22

Text Pages 43-44

Lesson Topic: Subtraction Combination of Two

Materials needed: Two paper cups or plastic containers

A variety of small concrete objects

Purposes: To teach the subtraction combination that 2 take away 1 equals 1

Procedures:

I. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Ask the children several questions.
   C. Do several demonstrations on the board to point out that no matter what kind of objects are in the sets, two take away one is one.

II. Teaching the page
   A. Have children turn to page 43.
   B. Demonstrate the subtraction combination 2 take away 1 equals 1.
   C. Read the direction aloud and clearly.
   D. Give individual help where needed.
   E. Encourage the children to work alone.

Suggestions for the teacher:

Enrichment Activities

Use Follow-up Activities as suggested on page 42 in Teacher's Edition.

Grade Level 1

Lesson No. 23

Text Pages 45-46

Lesson Topic: Indentification of Squares

Materials needed: Flannel board, felt squares of various size and color, felt circles and quadrilaterals (four sided figures other than square

Purposes: To teach the children to identify the plane geometric figure: square

Procedures:

I. Prebook Activities

Place a felt circle on the flannel board and have it identified. Say, today we are going to talk about another shape. Place a felt square on the flannel board. Ask if anyone knows its name. If not, say, "The name of this shape is square. Let's look at it very carefully so we can remember what a square looks like." Show that the sides are the same length and the corners all match. Turn the square about in many positions and have it named in each different position. Now add, one at a time, squares which differ from the first in color and or size. As each square is added, have it identified and discuss what ways it is the same or different from each of the other squares.

II. Teaching the page (Enrichment Activities)

Use Follow-up Activities on page 44 in Teacher's Edition. If time allows, draw a picture of a square on the chalkboard and pretend that this square is the frame for a picture. Say, "This is one side of a frame, this is another side of a frame, this is another and this is another." (A few children may have a tendency not to think of the top and bottom as sides. Therefore, it will be helpful if you would touch each of the four sides as you speak.)

Discuss with the children the row of shapes at the top of the page. Say, "Here you are to put a ring around all the shapes which are squares." Discuss the first shapes with them. "Should you put a ring around the first shape? Yes, it is a square so you should put a ring around it. What about the next shape? No, you should not put a ring around it, because it is not a square." Direct the children to finish the page independently. However, help them by saying, look carefully at each of the other shapes on this page.

Suggestions for the teacher:

Grade Level 1

Lesson No. 24

Text Pages 47-48

Lesson Topic: Recognition of Square Shapes

Materials needed: Concrete objects which contain squares, magazine pictures which contain squares

Purposes: To teach the recognition of square shapes in functional settings as well as isolation

Procedures:

I. Prebook Activities
   - A. Draw a large square on the chalkboard and have it identified. Say, "I am going to use this square to make a picture." Be sure to use the patterns that are listed under Prebook Activities of the simple drawing.
   - B. Afterwards, ask the children to suggest what you can make from other squares. Have the children find squares in objects about the classroom.
   - C. Use large colorful magazine or storybook pictures which contain one or more squares for group discussion.

II. Teaching the page
   - A. After the children have opened their books to page 47, discuss the pictures one at a time in reading order.
   - B. Allow a few minutes for discussion.
   - C. After each picture has been discussed, let the children complete the page independently, but give help where it is needed.

Suggestions for the teacher:

Have the children draw one or more squares and then make the squares into pictures of houses, trucks, and etc.

Grade Level 1

Lesson No. 25

Text Pages 49-50

Lesson Topic: Meaning of 3

Materials needed: Flannel board, felt cutouts in sets of three, felt cutout numeral 3

Purposes: To help the children understand the meaning of three and to associate the number idea with the numeral 3

Procedures:

I. Review the terms number and numeral

II. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Have the children work at the flannel board.

III. Teaching the page
   A. Have the children open their books to page 40.
   B. Discuss the picture at the top of the page.
   C. Be sure to read all the directions given.
   D. Check each child to be sure he understands.

IV. A review of the terms number and numeral should precede the lesson.

Suggestions for the teacher:

Enrichment Activities

Note: Be sure to read the mathematical learnings in Teacher's Edition on page 48.

Use Follow-up Activities if time allows.

Grade Level 1

Lesson No. 26

Text Pages 51-52

Lesson Topic: Recognition of Sets or Groups of 3

Materials needed: Flannel board, felt cutouts in sets of one, two, and three Felt cutout numeral 3

Purposes: To give the children practice in the recognition of sets or groups containing three objects To help the children recognize numeral 3 and to associate it with sets of three

Procedures:

I. Prebook Activities
  A. Follow Prebook Activities very closely.
  B. Make use of flannel board as suggested.
  C. Give help to each child if needed at the flannel board.

II. Teaching the page
  A. Have the children find page 51.
  B. Read all directions clearly.
  C. If necessary, demonstrate the directions.
  D. Check each page.

Suggestions for the teacher:

Enrichment Activities
Use Follow-up Activities if time allows.

Grade Level 1

Lesson No. 27

Text Pages 53-54

Lesson Topic: Identifying Sets or Groups by Number

Materials needed: Concrete object sets of one, two, and three

Number cards 1, 2, and 3

Purposes: To strengthen the understanding of the number three

To reinforce the association between the numeral 3 and the number three

Procedures:

- I. Prebook Activities
  - A. Follow Prebook Activities very closely, using all materials listed.
  - B. Be sure to ask the questions given.
- II. Teaching the page
  - A. The children will turn to page 53.
  - B. The teacher will read all directions clearly.
  - C. Repeat the directions if necessary.
  - D. Check the pupils' pages.

Suggestions for the teacher:
Enrichment Activities
Use the Follow-up Activities if time allows.

Grade Level 1

Lesson No. 28

Text Pages 55-56

Lesson Topic: Recognition of Numerals and Numbers

Materials needed: Concrete object sets of one, two, and three
Number cards 1, 2, and 3

Purposes: To help children develop the ability to recognize numerals 1, 2, and 3 and to associate them with the numbers of corresponding sets of one, two, and three

Procedures:

I. Mathematical Learnings
In the previous lesson the children counted the number of elements in a given set and selected the numeral which "stands for" the number. Now they will be asked to look at a numeral, think of the number for which it stands, and then choose from two sets only the set which has the given number.

II. Prebook Activities
Follow the Prebook Activities very closely.

III. Teaching the page
- A. The children will turn to page 55.
- B. The teacher will read all directions aloud.
- C. Check the page.

Suggestions for the teacher:
Enrichment Activities: Use the Follow-up Activities if time allows.

Grade Level 1

Lesson No. 29

Text Pages 57-58

Lesson Topic: The Natural Order of Numbers

Materials needed: Number cards 1, 2, and 3

Purposes: To teach the natural order of numbers through 3

To teach the meaning of the ordinals: first, second, and third

Procedures:

I. Mathematical Learning on page 56

II. Prebook Activities
  - A. Follow Prebook Activities very closely.
  - B. Discuss the natural order.
  - C. Discuss the meaning of first, second, and third.
    Have three children pretend they are buying tickets to a show and stand in line. Explain that who is first depends on where we start. Then indicate the starting point of the line and ask: "Who is first in the line? Who is second? Who is third?"
    Explain that the names first, second, and third tell which boy or girl, or object, is referred to in a line, row, or a set. The words one, two, and three tell how many there are in the row or the line or the set.

III. Teaching the page
  - A. The children will turn to page 51.
  - B. The teacher will read all directions aloud.
  - C. Check the page.

Suggestions for the teacher:

Use Follow-up Activities if time allows.

Grade Level 1

Lesson No. 30

Text Pages 59-60

Lesson Topic: Comparing Sets or Groups

Materials needed: A set of three books, pencils, or other objects

Purposes: To compare sets or groups of one, two, and three

To provide an informal introduction to the study of addition and subtraction combinations of three

Procedures:

I. Prebook Activities
  A. Read Mathematical Learning before beginning class.
  B. Discuss pairs of sets.
  C. Follow Prebook Activities very closely.

II. Teaching the page
  A. Have the children open their books to page 59.
  B. Read all of the directions given.
  C. Have a discussion of the pictures.

Suggestions for the teacher:

Enrichment Activities: Use Follow-up Activities if time allows.

Grade Level 1

Lesson No. 31

Text Pages 61-62

Lesson Topic: Adding to Make Equivalent Sets

Materials needed: Flannel board

A variety of felt cutouts

Purposes: To teach the children to add to smaller sets to make a set which will be equivalent to a set of three

Procedures:

I. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Ask the children several questions.

II. Teaching the page
   A. Let the children locate page 61.
   B. Direct their attention to the boxes.
   C. Read the directions aloud.
   D. Check each child's page.
   E. Ask a few oral questions. This will let you know whether he really understands the work.

Suggestions for the teacher:

Enrichment Activities: Use Follow-up Activities as suggested on page 60 in Teacher's Edition.

Grade Level 1

Lesson No. 32

Text Pages 63-64

Lesson Topic: Adding to Match Sets and Numbers

Materials needed: Flannel board, felt cutouts in sets of three

Felt numeral 3

Purposes: To teach the children to add to sets of one and two to make sets which will have the number three To provide informal experience in the handling of addition combinations of three

Procedures:

I. Read Mathematical Learnings before class.

II. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Repeat some of the activities if necessary.

III. Teaching the page
   A. The children will turn to page 63.
   B. The teacher will read all the directions aloud, and clearly.
   C. Make sure the children understand before beginning to work in their books.
   D. Check each page.

Suggestions for the teacher:

Enrichment Activities: Use Follow-up Activities if time allows.

Grade Level 1

Lesson No. 33

Text Pages 65-66

Lesson Topic: Addition Combinations of 3

Materials needed: Three paper cups or plastic containers, a variety of small concrete objects

Purposes: To provide experience in the handling of the addition combinations of three: 2 plus 1 equals 3 and 1 plus 2 equals 3

Demonstrate the commutative property of addition.

Procedures:

I. Read Mathematical Learnings before class.
II. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Let the children experiment with adding.
III. Teaching the page
   A. The children will turn to page 65.
   B. The teacher will read the directions aloud and clearly.
   C. Check to see that each child is following directions.

Suggestions for the teacher:

Enrichment Activities: Use Follow-up Activities on page 64 if time allows. The slower learners may need extra practice with concrete objects to fully understand the addition combinations of three and the commutative property of addition. A number line drawn on the chalkboard or on ditto sheets will provide additional help.

Grade Level 1

Lesson No. 34

Text Pages 67-68

Lesson Topic: Subtracting to Make Equivalent Sets

Materials needed: Flannel board

A variety of felt cutouts

Purposes: To teach the children to take one or two away from sets of three to make a set which will be equivalent to a set of two or one

Procedures:

I. Review briefly lesson number 39 for more meaninful and better understanding of lesson 42.

II. Prebook Activities
   - A. Follow Prebook Activities very closely.
   - B. Use flannel board.

III. Teaching the page
   - A. Have the children locate page 67.
   - B. Direct their attention to the boxes.
   - C. Read the directions.
   - D. Check the child's page.

Suggestions for the teacher:

Enrichment Activities: Use Follow-up Activities as suggested on page 66 in Teacher's Edition.

Grade Level 1

Lesson No. 35

Text Pages 69-70

Lesson Topic: Subtracting to Match Sets and Numbers

Materials needed: Flannel board, felt cutouts in sets of three, felt numerals 1 and 2

Purposes: To show that one or two must be taken away from a given set of three to form a set whose number will be two or one   To provide informal experience in handling the subtraction combinations of three

Procedures:

I. Read Mathematical Learnings before class.

II. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. All of the questions in the Teacher's Edition should be asked and then discussed thoroughly.

III. Teaching the page
   A. The children examine the boxes on page 69.
   B. The teacher will read the directions aloud and clearly.
   C. Give help if necessary.
   D. Check each page.

Suggestions for the teacher:

Enrichment Activities: Use Follow-up Activities if time allows.

Grade Level 1

Lesson No. 36

Text Pages 71-72

Lesson Topic: Subtraction Combination of 3

Materials needed: Paper cup or plastic container
A variety of small concrete objects

Purposes: To teach the subtraction combinations of three: 3 take away 1 equals 2 and 3 take away 2 equals 1

Procedures:

I. Read Mathematical Learnings before class.

II. Prebook Activities
Follow Prebook Activities very closely.

III. Teaching the page
   A. The children will turn to page 71.
   B. The teacher will read the directions aloud and clearly. Repeat if necessary.
   C. Check each page.

Suggestions for the teacher:
Enrichment Activities: Use Follow-up Activities if time allows.
Extra practice may be needed for these subtraction combinations. Have three children stand in front of the class. Then ask, "How many children are there at the front of the room? How many will be standing if one child goes to his seat?" Do the same for 3 less 2.

Grade Level 1

Lesson No. 37

Text Pages 73-74

Lesson Topic: Identification of Rectangles

Materials needed: Flannel board, felt rectangles of various size and color and felt circle and square

Purposes: To teach the children to identify the plane geometric figure: rectangle

Procedures:

I. Prebook Activities
   - A. Place a felt circle on the flannel board and have it identified. Add a felt square and have it named.
   - B. Say, "Today we are going to learn about another shape."
   - C. Can you say rectangle? Look carefully at the rectangle and tell me in what ways it is like the square?
   - D. Stress that the opposite sides are the same length.
   - E. Turn the rectangle so that it can be viewed from many angles.
   - F. Add, one at a time, a variety of rectangles which differ from the first in color, size, and/or proportion.

II. Teaching the page
   - A. Have children open their books to page 73. Discuss each of the shapes at the top of the page, making sure the children understand that they are all rectangles.
   - B. Direct their attention to the outlined shapes on the lower portion of the page. Say, "Look carefully at each of these shapes. If a shape is a rectangle, please draw a ring around it." Stress this.

Suggestions for the teacher:

Follow-up Activities may be used to give children plenty of opportunities to work with identifying rectangles.

Grade Level 1

Lesson No. 38

Text Pages 74-75

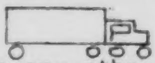
Lesson Topic: Recognition of Rectangular Shapes

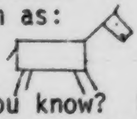
Materials needed: Concrete objects which contain rectangles and magazine pictures which contain rectangles

Purposes: To teach the recognition of rectangular shapes in functional settings as well as in isolation

Procedures:

I. Prebook Activities
   - A. Draw a large triangle on the chalkboard and have it identified. Say, "I am going to use this rectangle to make a picture."
   - B. Using the rectangle, draw a simple picture such as:





   - C. Ask, Do you see any other shapes whose names you know? Draw several other rectangles and have the children take turns suggesting and/or drawing other pictures using them.
   - D. Have the children find and point out rectangles about the classroom, on the playground, or in the gym.
   - E. Assemble several familiar objects which exhibit the rectangular shape and allow the children to touch and manipulate the objects until they find the rectangle or rectangles in each.
   - F. Present large colorful magazine or storybook pictures which contain one or more rectangles for discussion.
   - G. Have the children find, point out, and name each rectangle. Have any circles and squares which appear in the pictures identified, too.

II. Teaching the page
   - A. Have children open their books to page 75. Call their attention to the picture in the first box. Say, "Look carefully at the domino in the first box. Do you see any shapes here whose name you know?"
   - B. Discuss the shapes found in the pictures in each of the remaining boxes.
   - C. Have children draw rings around all pictures that contain rectangles.
   - D. After discussing the three pictures at the top of page with the children, encourage the children to complete the page independently.

Suggestions for the teacher:

Follow-up Activities: The activities should be used to reinforce what has been taught fot the more and less able children.

Grade Level 1

Lesson No. 39

Text Pages 77-78

Lesson Topic: Meaning of Four

Materials needed: Flannel board, felt cutouts in sets of four
Felt numeral 4

Purposes: To help the children understand the meaning of four and to associate the number idea with the numeral 4   To give practice in the recognition of sets or groups containing four objects

Procedures:

I. Arrange several sets, each containing one felt cutout, on the flannel board.
    A. Have children give the number (one) of each set. Add one more and have the number (two) of each set given.
    B. Add another cutout to each of the sets and have the number (three) of each set given.
    C. Finally, add one more cutout to each of the sets. Follow the above precedure. Encourage the children to suggest the number 4.

II. Teaching the page
    A. Have children open their books to page 77.
    B. Discuss with the children the number dictionary on page 77.
    C. Allow a few minutes for discussion.
    D. Follow closely the teacher's manual and read the directions clearly and loud. Be sure to check for pupils that are not able to follow directions.

Suggestions for the teacher:

Enrichment Activities: Use Follow-up Activities as suggested on page 76 in Teacher's Edition if time allows.

Grade Level 1

Lesson No. 40

Text Pages 79-80

Lesson Topic: Identifying Sets or Groups by Number

Materials needed: Flannel board, a variety of felt cutouts

Felt cutout numerals 1, 2, 3, 4 Yarn or string

Purposes: To strengthen the understanding of the number four

To reinforce the association between the number four and the numeral 4

Procedures:

I. Prebook Activities
   A. Follow the procedures listed in teacher's manual very closely.
   B. Arrange several sets of one, two, three, and four felt cutouts on the flannel board.
   C. Have each of these numerals identified.

II. Teaching the page
   A. Have the children turn to page 79. Direct their attention to the first box.
   B. Demonstrate the first block of pictures.
   C. Encourage the children to complete the page independently.

Suggestions for the teacher:

Enrichment Activities: Use Follow-up Activities as suggested on page 78 in Teacher's Edition.

Grade Level 1

Lesson No. 41

Text Pages 81-82

Lesson Topic: Recognition of Numerals and Numbers

Materials needed: Concrete objects, sets through four, number cards 1, 2, 3, and 4

Purposes: To help children develop the ability to recognize and associate numeral 4 with any set of four

Procedures:

I. Arrange sets of objects and have children select number card and name the number of each set.
II. Draw two sets on blackboard and write the numeral in the box. Circle the set that matches the numeral.
III. Turn to page 81 and look at first box. Check and see that a ring is drawn around the set that tells the number named by the numeral.
IV. Finish the page independently.

Suggestions for the teacher:

Extra pages may be prepared similar to page 81 for those who still need help.
Page 82 may be used for extra activity for fast workers.
1 and 3 page 80
For fun, activity 2 page 80

Grade Level 1

Lesson No. 42

Text Pages 83-84

Lesson Topic: Comparing Sets or Groups

Materials needed: Four chairs

Purposes: To compare sets of one, two, three and four

To provide informal introduction to addition and subtraction combinations of four

Procedures:

- I. Prebook Activities
  - A. Place 4 chairs and call 3 children. Compare and decide which set has more? How many more? Encourage the children to make use of the numbers of the sets to answer.
  - B. Continue with Prebook Activities, page 82 Teacher's Edition, until understanding of more and less, how much more and how much less of sets through four is acquired.
- II. Teaching the page
  Follow suggestions, page 82, stressing equivalence of sets in last row as means of reinforcement and reciew of terminology and understanding.
- III. Enrichment
  Follow-up Activities 2, 3, and 4 on page 82 of Teacher's Edition

Suggestions for the teacher:

Mathematical Learnings: Through comparing paired sets or groups it is possible for the children to determine the relative value of the numbers one, two, three and four. Such comparisions serve to point out informally the addition and subtraction combinations of four.

Grade Level 1

Lesson No. 43

Text Pages 85-86

Lesson Topic: Adding to Match Sets and Numbers

Materials needed: Flannel board, a variety of felt cutouts, felt numeral 4

Purposes: To teach the children to add to smaller sets to make sets which will have the number four To provide informal experiences in handling the addition combinations of four

Procedures:

I. Prebook Activities
   A. Arrange a piece of yarn on the flannel board to form a set outline.
   B. Place the felt cutout four near the outline and have it identified.
   C. Continue with the procedures that are suggested in Teacher's Edition, page 84.

II. Teaching the page
   A. Have the children look closely at the first box on page 85.
   B. Ask someone to identify the numeral 4 in the small box.
   C. Ask questions about the pictures.
   D. Urge pupils to complete the page by themselves.

Suggestions for the teacher:

Enrichment Activities: Have the children use page 86 to make equivalent sets. Direct them to draw enough balls in each of the larger boxes to make a set which is equivalent to the set of rectangles in the smaller box.

Grade Level 1

Lesson No. 44

Text Pages 87-88

Lesson Topic: Adding Combinations of Four

Materials needed: Three paper cups or plastic containers

Purposes: To provide experience in the handling of the addition combinations of four: 3 plus 1 equals 4, 1 plus 3 equals 4, and 2 plus 2 equals 4

Procedures:

I. Briefly review the commutative property of addition.

II. Prebook Activities

  A. Follow step by step the procedures that are suggested under Prebook Activities in Teacher's Edition, page 86.

  B. Demonstrate the adding together of sets of two and two. Help the children verbalize their results "Two and two are four."

III. Teaching the page

  A. Tell the children to open their books to page 87 and look at the first row.

  B. Follow very closely the suggestions that are listed in Teacher's Edition, page 86.

Suggestions for the teacher:

Note Mathematical Learnings on page 86.
The children can now use the number meaning bars to construct 4 squares to show the addition combinations of four.

Grade Level 1

Lesson No. 45

Text Pages 89-90

Lesson Topic: Subtracting to Match Sets and Numbers

Materials needed: Flannel board, felt cutouts in sets of four, felt numerals 1, 2, and 3

Purposes: To teach the children that smaller sets can be formed by taking away or subtracting from sets of four To provide informal experience in handling the subtraction combinations of four

Procedures:

I. Prebook Activities
Follow Prebook Activities very closely in Teacher's Edition, page 88.

II. Teaching the page
Read the directions aloud. As the children examine the first box on page 89, have them identify numeral 3 in the smaller box. Use the same procedures that are suggested. Give individual help where needed.

Suggestions for the teacher:

Have the children use page 90 to make equivalent sets. Direct them to draw pictures of sets of four in each of the large boxes. Then they must take away (by crossing out) enough of their objects to match the number represented by rectangles in the small box in the upper left corner.

Grade Level 1

Lesson No. 46

Text Pages 91-92

Lesson Topic: Subtraction Combinations of 4

Materials needed: Paper cup or plastic container, a variety of small concrete objects

Purposes: To teach the subtraction combinations of four take away 1 equals 3, 4 take away 2 equals 2, and 4 take away 3 equals 1

Procedures:

I. Prebook Activities
   Follow Prebook Activities suggested in Teacher's Edition, page 90.

II. Teaching the page
   A. Tell the children to turn their book to page 91.
   B. Demonstrate the subtraction combinations of four.
   C. Follow closely the procedures in Teacher's Edition, page 90.

Suggestions for the teacher:

Give the children an opportunity to create their own picture stories to demonstrate the subtraction combinations of four page 92.
Have some of the children display papers and tell the subtraction stories pictured.

Grade Level 1

Lesson No. 47

Text Pages 93-94

Lesson Topic: Identification of Triangles

Materials needed: Flannel board, felt triangles, circles, squares, and rectangles, and blocks

Purposes: To give the children experience in identifying triangles

Procedures:

I. Review circles, squares, and rectangles.
Place several of each on the flannel board, having each shape named as added. (If necessary, review number of sides and corners.)

II. Introduce triangle.
   A. Place triangle on flannel board.
      1. Discover how many sides and corners.
      2. Give name.
      3. Turn so that different positions are seen and conclude that position does not alter shape.
   B. Add triangle of different type and conclude that it is a triangle because of 3 sides and 3 corners. Add others.

III. Using page 93
Discuss shapes at top of page and identify (by color, size, name, etc.)

IV. Follow-up Activities
   A. Game "I Spy" looking for triangles, circles, squares, and rectangles seen around room in books, blocks, windows, doors, blackboards, desk tops, tables, etc.
   B. Practice drawing triangles in the air, on the board.
   C. Use page 94 to draw triangles varied in size, color, and placement.

Suggestions to the teacher:

Mathematical Learning develops the meaning of a triangle as a closed plane having three sides and three angles. Important that children be expased to a great variety of triangles.

Grade Level 1

Lesson No. 48

Text Pages 95-96

Lesson Topic: Recognition of Triangular Shapes

Materials needed: Concrete objects which contain triangles, magazine pictures which contain triangles

Purposes: To teach the recognition of triangular shapes in functional settings as well as in isolation

Procedures:

I. Read Mathematical Learning

II. Prebook Activities
Follow the Prebook Activities as given.

III. Teaching the page
As the children turn to page 95 in their books, direct their attention to the first box. Ask the questions as given. Discuss all known shapes.

Suggestions for the teacher:

Enrichment Activity - Use the follow-up exercise if time allows.

Grade Level 1

Lesson No. 49

Text Pages 97-98

Lesson Topic: The Meaning of Five

Materials needed: Flannel board, felt cutouts in sets of five, felt numeral 5

Purposes: To understand the meaning of five and to associate the number with the numeral

Procedures:

- I. Prebook Activities
  Page 96, Teacher's Edition
- II. Teaching the page
  - A. Supervise finding the page 97.
  - B. Discuss number dictionary at top of page.
  - C. Name the numeral in the yellow square.
  - D. Circle each set having the number of objects named by the numeral.
  - E. Name each set by drawing a line from the numeral to each set having that number.
- III. Follow-up Activities
  Use activities one, two, and three, page 96.

Suggestions for the teacher:
Other games may be played: "Telephone" in which teacher rings, pupils say "number please", teacher holds up objects and pupils write numerals on board - any numbers studied may be used for review. (Sometimes she may prefer to dictate numbers after counting is mastered.)

Grade Level 1

Lesson No. 50

Text Pages 99-100

Lesson Topic: Identifying Sets by Number

Materials needed: Flannel board, felt cutouts, numerals 1, 2, 3, 4, and 5 and yarn

Purposes: To strengthen understanding of five

To reinforce association of numbers with numeral 5

Procedures:

I. Arrange sets of 1, 2, 3, 4, and 5 on flannel board and have sets "named" by correct numeral.
II. Direct the children to turn to page 99. See the pictures in the first box and put finger on the numeral that tells the number and draw a ring around the numeral.
III. Finish the page independently, proceeding from left to right.
IV. Use Follow-up Activities 1, 2, and 3, page 98, Teacher's Edition.

Suggestions for the teacher:

Follow-up Activity 3, page 100, may be used for fast pupils as slower ones complete the page.

Grade Level 1

Lesson No. 51

Text Pages 101-102

Lesson Topic: Recognition of Numerals and Numbers

Materials needed: Flannel board, variety of felt cutouts, number cards 1, 2, 3, 4, and 5

Purposes: To help the children develop the ability to recognize numeral 5 and to associate it with the number of any set containing five objects

Procedures:

I. Mathematical Learning
   The children will be asked to look at a numeral, think of the number for which it stands, and then choose from two sets only the set which has the given number.

II. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Use the chalkboard for examples.

III. Teaching the page
   A. Let the children examine the boxes on page 101.
   B. Read the directions.
   C. Check each page.

IV. Enrichment Activities
   Use the Follow-up Activities if time allows.

Suggestions for the teacher:

Additional understanding of the numeral 5 and the number five may be provided by displaying 3 sets of 4 objects each. Have the pupils tell the number of each set. Then place another object in each set and stress the "one more" idea. Ask, "What is alike about these sets? (equivalent) Does each set have the same number of objects?" (yes) Have pupils move the objects, use yarn, or draw chalk marks to show a one-to-one matching between each pair of sets.

Point to each set in turn and ask, "How many objects does this set contain? (5) What is the number of this set?" (5) Some pupils may not have the concept of five objects, so emphasize that what is alike about these sets is what we call the number five.

Grade Level 1

Lesson No. 52

Text Pages 103-104

Lesson Topic: Comparing Sets or Groups

Materials needed: A set of five books, pencils, or other objects

Purposes: To compare sets or groups of one, two, three, four, and five

To provide an informal introduction to the addition and subtraction combinations of five

Procedures:

I. Mathematical Learning
   By comparing paired sets, or groups, the children will be able to determine the relative value of the numbers one, two, three, four, and five. For examples they will find that five is one more than four and four more than one.

II. Prebook Activities
   Follow Prebook Activities very closely.

III. Teaching the page
   A. The children will open their books to page 103.
   B. The teacher will read all directions.
   C. Be sure to ask questions.

Suggestions for the teacher:

Enrichment Activities: Use the Follow-up Activities if time allows.

Grade Level 1

Lesson No. 53

Text Pages 105-106

Lesson Topic: Adding to Match Sets and Numbers

Materials needed: Flannel board, a variety of felt cutouts, felt numeral 5, string or yarn

Purposes: To teach the children to add to smaller sets to make sets which will have the number five To provide informal experience in handling the addition combinations of five

Procedures:

I. Mathematical Learning
The children will be asked to match sets with the given numbers. That is, they will be given a set of one, two. three, or four and asked to use it to make a set which will have the number five.

II. Prebook Activities
The teacher will follow the Prebook Activities very closely.

III. Teaching the page
A. The children will open their books to page 105.
B. The teacher will read the directions.
C. Check each page.

Suggestions for the teacher:

Enrichment Activities: Use the Follow-up Activities if time allows.

Grade Level 1

Lesson No. 54

Text Pages 107-108

Lesson Topic: Addition Combinations of Five

Materials needed: Three cups and a variety of small objects

Purposes: To provide experience in handling the addition combinations of 5 (except zero)

Procedures:

I. Using three cups, demonstrate joining of sets four and one to make five. Then one and four, two and three, three and two.
II. In each case help the children verbalize the addition combinations they are demonstrating.
III. As the children study the pictures on the first row, page 107, help them "discover" the addition story of four plus one makes five, then circle the numerals in each box that tell.
IV. In the same way find and tell remaining combinations shown in each row.
V. Enrichment may be provided in Follow-up Activities 3, 4, and 5, p. 106.

Suggestions for the teacher:

The commutative property of addition is shown on this page. The children will see that 4 + 1 = 1 + 4, etc.

Grade Level 1

Lesson No. 55

Text Pages 109-110

Lesson Topic: Subtracting to Match Sets and Numbers

Materials needed: Flannel board, felt cutouts in sets of five and felt numerals 1, 2, 3, and 4

Purposes: To provide practice in handling combinations of five

To show that smaller sets come by subtracting

Procedures:

I. Have pupils identify the felt numeral 4 and continue with Prebook Activities p. 108, letting different pupils demonstrate making sets to match the numeral by taking away.
II. Explain that the numerals in the boxes on p. 109 tell how many there should be in each box.
III. Lead them to suggest "taking away" by crossing out and making the set match number named by the numeral.
IV. Let them complete the page independently.
V. Enrichment and relaxation may be provided in Follow-up Activity 1 and 2.
VI. Extra practice, p. 110.

Suggestions for the teacher:

Mathematical Learnings:
The children will be asked to match sets with given numbers. Given a set of five, they must take away one, two, three, or four to form a set whose number is four, three, two, or one.

Grade Level 1

Lesson No. 56

Text Pages 111-112

Lesson Topic: Subtraction Combinations of Five

Materials needed: Plastic or cardboard container and small objects

Purposes: To teach 5 take away 1 equals 4, 5 take away 2 equals 3, etc.
(Zero excluded)

Procedures:

I. Have children examine contents of carton and give the number of the set. (5)

II. Let child remove one and verbalize his discovery, "Five take away one is four." Continue the same way with each other subtraction combination of five.

III. Turn to page 111 and examine each box in the first row. Discover what happened and tell a number story. Draw a ring around the numeral in each box that tells the subtraction story. Continue each row, verbalizing, "Five cars take away two cars is three cars," etc. as the pictures indicate.

IV. Enrichment and enjoyment
   A. Finger play activity 1, p. 110
   B. Activity 3, p. 110
   C. Page 112

Suggestions for the teacher:

Children may make up or demonstrate their own subtraction stories, orally or with objects as they are able.

Grade Level 1

Lesson No. 57

Text Pages 113-114

Lesson Topic: Natural Order of Numbers

Materials needed: Number cards 1, 2, 3, 4, and 5

Purposes: To review the natural order of numbers, one through five

To reinforce the understanding of ordinal numbers

Procedures:

I. Mathematical Learning
   In counting, the numbers are used in their natural order, each number after one is one more than the number preceding it.

II. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Use example as given in text.

III. Teaching the page
   A. The children will examine page 113.
   B. Read the directions.
   C. Check each page.

Suggestions for the teacher:

Enrichment Activities: Use Follow-up Activities if time allows.
Call attention to the similarity of the words third and three, fourth and four, and fifth and five.

Grade Level 1

Lesson No. 58

Text Pages 115-116

Lesson Topic: Meaning of 6

Materials needed: Flannel board, felt cutouts in sets of six, felt numeral 6

Purposes: To help the children understand the meaning of six and to associate the number idea with the numeral 6 To give the children practice in the recognition of sets or groups containing six objects

Procedures:

I. Mathematical Learnings
   This lesson stresses the idea that the numeral 6 stands for the number six.

II. Prebook Activities
   - A. Arrange several sets, each containing five felt cutouts, on the flannel board.
   - B. Have the children give the number of each set.
   - C. Add the felt cutout six to the board and have it identified.
   - D. Follow the Prebook Activities very closely.

III. Teaching the page
   - A. Ask the children to turn to page 115, point out the partial number dictionary at the top of the page.
   - B. Read the directions aloud.

Suggestions for the teacher:

Enrichment Activities: Follow activities listed in Teacher's Edition. After each of the next five lessons, it may be beneficial to have the better students assist the slower ones on a one-to-one basis for the purpose of reinforcement of the lessons on numbers larger than five.

Grade Level 1

Lesson No. 59

Text Pages 117-118

Lesson Topic: Meaning of 7

Materials needed: A variety of concrete objects, number cards 1, 2, 3, 4, 5, 6 and 7

Purposes: To help the children understand the meaning of seven and to associate the number idea with the numeral 7

Procedures:

I. Mathematical Learning
   This lesson stresses the idea that the numeral 7 stands for the number seven.

II. Prebook Activities
   Follow Prebook Activities very closely.

III. Teaching the page
   A. The children will open their books to page 117.
   B. The teacher will read the directions.

Suggestions for the teacher:

Enrichment Activities: Use the Follow-up Activities if time allows.

Grade Level 1

Lesson No. 60

Text Pages 119-120

Lesson Topic: Meaning of 8

Materials needed: Flannel board, felt cutouts in sets of eight, felt numeral 8

Purposes: To help children understand the meaning of eight and associate number with numeral eight

Procedures:

I. Arrange several sets of seven and have children determine number or sets.
II. Add one and think of new number 8 as (a) one more than seven; (b) eight is seven and one; (c) eight comes after seven; (d) eight is larger than seven, greater than seven, six etc.
III. Direct the children to inspect the partial number dictionary at the top of the page and compare numbers as to more and how much more.
IV. Draw a ring around each set at the bottom of the page that has the number named by the numeral.
V. "Name" the number of the set by drawing a line from the set to the numeral.
VI. Use Follow-up Activities 1 for extra practice in rate counting. Follow-up Activity 3 as extra practice in writing numeral 8 correctly, or any numeral needed

Suggestions for the teacher:

More practice will be needed in these numbers above 5 if children have not attended kindergarten or had previous number experiences at home. Page 120 will give extra practice in determining sets of 8.

Grade Level 1

Lesson No. 61

Text Pages 121-122

Lesson Topic: Meaning of 9

Materials needed: Flannel board, felt cutouts in sets of nine, felt numeral 9, yarn, number cards 1, 2, 3, 4, 5, 6, 7, 8, and 9

Purposes: To help the children understand the meaning of nine and to associate the number idea with numeral 9. To provide practice in recognition of sets on groups containing nine objects

Procedures:

- I. Mathematical Learnings
  This lesson stresses the idea that the numeral 9 stands for the number nine.
- II. Prebook Activities
  - A. Follow Prebook Activities very closely.
  - B. Make several set outlines with yarn on the flannel board.
- III. Teaching the page
  - A. The children will turn to page 121.
  - B. The top of the page should be fully discussed with the children.
  - C. Read all directions aloud.
  - D. Check the page.

Suggestions for the teacher:

Use Follow-up Activities on page 122.

Grade Level 1

Lesson No. 62

Text Pages 123-124

Lesson Topic: The Meaning of Ten

Materials needed: A variety of objects, number cards 1 through 10

Purposes: To help children understand the meaning of and association of the number and numeral 10

Procedures:

I. Have children match number cards with display sets through nine.
II. Here we have nine and one more. We call this new number ten. Ten is one more than nine.
III. Present new number card with ten and state it is the numeral 10 that stands for the new number 10.
IV. Direct the finding of p. 123 and discussion of number dictionary at top of page, comparing the sets greater and lesser.
V. Directions for completing page independently, p. 122.

Suggestions for the teacher:
Follow-up Activities 1, 2, 3, and 4

Grade Level 1

Lesson No. 63

Text Pages 125-126

Lesson Topic: Identifying Sets or Groups by Number

Materials needed: Concrete objects, six through ten, number cards 6 through 10

Purposes: To strengthen understanding and association of numbers and numerals 6-10

Procedures:

I. Have concrete sets of 6 through 10 around the room.
II. Have different pupils match number cards with sets of objects 6 through 10.
III. Have children take turns first printing out a set to be counted and then choosing someone to find the numeral which tells the number of the set.
IV. Find p. 125, and direct children to count the objects in each box and circle the numeral that tells the number.

Suggestions for the teacher:

Extra practice may be found in Follow-up Activities, p. 124, 1 and 2. Number 3 may be used as test. Also a board activity having different children write numerals of model sets is enjoyable for children.

Grade Level 1

Lesson No. 64

Text Pages 127-128

Lesson Topic: Review 1-10 - Natural Order of Numbers

Materials needed: Number cards 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10

Purposes: To review the natural order of numbers, one through ten

To strengthen the understanding of ordinal numbers

Procedures:

I. Prebook Activities
   Page 126 Teacher's Edition

II. Teaching the page
   A. Supervise finding page 127.
   B. Pass out ten number cards bearing numerals 1 through 10.
   C. Have children who receive these cards arrange them on the chalktray so that they show the natural order of numbers.
   D. Read the directions aloud.

Suggestions for the teacher:

Enrichment Activities: Follow-up Activities listed on page 126 in Teacher's Edition

Grade Level 1

Lesson No. 65

Text Pages 1 - Book 1, Second Edition

Lesson Topic: Sets of Objects

Materials needed: Familiar sets, crayons, books, dishes, pencils, etc.

Purposes: To help pupils learn meaning and become familiar with term "set"

Procedures:

I. Show and Refer to a set as a group or a collection.
II. Show other sets.
III. Ask children to mention other sets they can think of as: a ball team, clubs, etc.
IV. Print the word set on board.
V. Have pupils study picture and describe sets they find in pictures.
VI. Emphasize 1, 2, 3, and 4 in Using the page, p. 1.

Suggestions for the teacher:
Postbook Activities page 1

Grade Level 1

Lesson No. 66

Text Pages 2 and 3

Lesson Topic: Geometric Shapes

Materials needed: Flannel board, cutouts of □'s △'s ○'s

colored yarn

Purposes: To aid and strengthen the pupils ability to recognize geometric shapes - square, triangle, circle and to develop concept of relative size

Procedures:

I. Prebook Activities
   A. Follow Prebook Activities very closely.
   B. Have pupils identify the shapes of each figure.
   C. Encourage several pupils to participate in the activity.

II. Teaching the page
   A. Have the children to open their books to page 2. When finished continue on page 3 as directed in "using page" 3.
   B. Read aloud the direction for each panel.
   C. Check each child's work very closely to see if they understand the shapes and pictures they are to draw the ring around.

Suggestions for the teacher:

Enrichment Activities: Use the activities suggested on page 2 and 3 in Teacher's Edition.

Grade Level: 1

Lesson No. 67

Text Pages 4 and 5

Lesson Topic: Identification of Sets

Materials needed: Cutouts which are exactly alike, yarn, sets of concrete objects which are all alike

Purposes: To help pupils learn to identify sets and to select subsets

To extend the pupils concept of sets of objects

Procedures:

I. Mathematical Background before class

II. Teaching the lesson

   A. Prebook Activities: Follow this activity very closely before teaching the page.

   B. Using the page: Read aloud the directions and have pupils do the excerises.

   C. Check the page.

Suggestions for the teacher:

Make use of Postbook Activities and Enrichment Activities as suggested in Teacher's Edition.

Grade Level 1

Lesson No. 68

Text Pages

Lesson Topic: Review 1, After Page 5 Set-Numbers and Numerals

Materials needed: Copies of review

Purposes: To evaluate the pupils' understanding of identification of sets and geometric shapes

Procedures:
  I. Pass out copies.
 II. Read and have pupils follow directions.
III. Pass in and check all papers for evaluation.

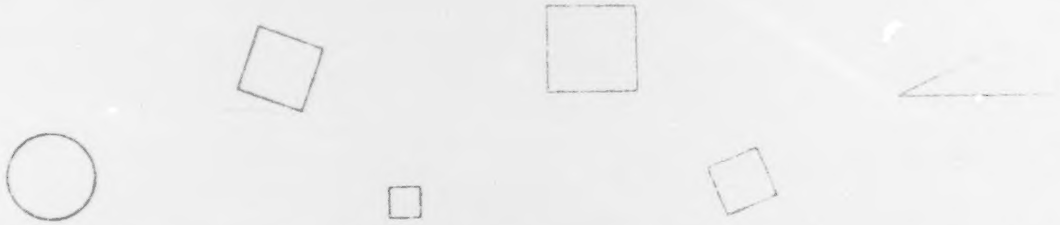
Suggestions for the teacher:
Evaluation will indicate weaknesses.

Review 1

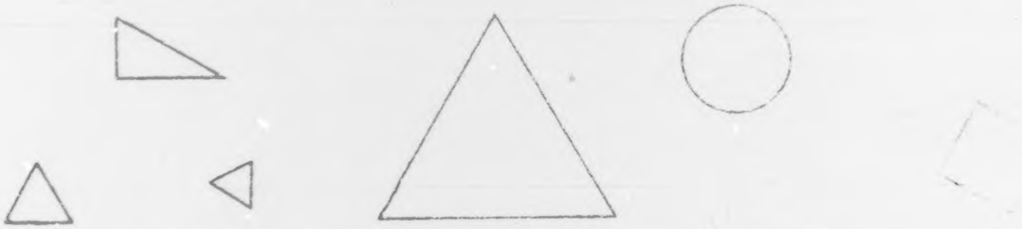
Name

Use after page 5 of Sets • Numbers • Numerals 1

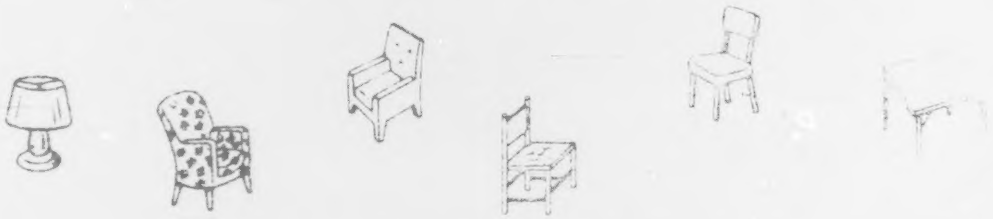
Draw a ring around the set of squares.
Mark an X on the smallest square.



Draw a ring around the set of triangles.
Draw a line under the largest triangle.



Draw a ring around the set of chairs.



Draw a triangle.

Draw a square.

Grade Level 1

Lesson No. 69

Text Pages 6 and 7

Lesson Topic: One-to-One Matching

Materials needed: Sets of books, crayons, toys, flannel cutouts, three large objects in the room, such as a picture, a book and a toy

Purposes: To help pupils understand the concept of equivalent sets and to help pupils develop a deeper understanding of one-to-one matching

Procedures:

I. Prebook Activities
   A. Follow very closely the activities listed in Teacher's Edition.
   B. Display two equivalent sets on the board and have pupils show a one-to-one matching.
   C. Encourage group participation.

II. Using the page (6)
   A. Ask the children to open their books to page 6.
   B. Read aloud the directions for each panel.

III. Using the page (7)
   A. Follow the directions that are given in Teacher's Edition on page 7.
   B. Check each child's work very closely.

Suggestions for the teacher:

Enrichment Activities: Use the Postbook Activities listed in Teacher's Edition.

Grade Level 1

Lesson No. 70

Text Pages 8 & 9

Lesson Topic: Non-Equivalent Sets

Materials needed: Cutouts for the flannel board and yarn

Purposes: To discover and strengthen concepts of non-equivalent sets

Procedures:

I. Have sets of different numbers matched one-to-one.
II. Let them discover the non-equivalence and answer questions.
    A. Are the sets matched one-to-one? (equivalent)
    B. Do they have the same number?
    C. Are they non-equivalent?
    D. Which set contains more? fewer?
III. Proceed with page as directed.
IV. Page 9 follows naturally as directed.

Suggestions for the teacher:

Postbook Activities page 9 may be used to precede the working of page 9 in book.

Grade Level 1

Lesson No. 71

Text Pages After p. 9

Lesson Topic: Review 2, After Page 9, S. N. & N 1

Materials needed: Copies of review

Purposes: To review and evaluate understanding of equivalent and non-equivalent sets

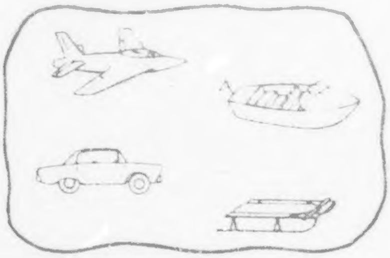
Procedures:
I. Pass out copies.
II. Read and have pupils follow directions.
III. Pass in and check all papers for evaluation.

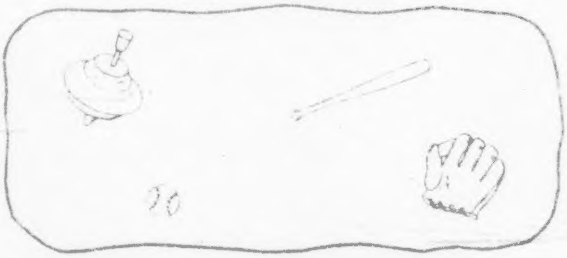
Suggestions for the teacher:
Evaluation will indicate weaknesses and needed instruction.

Review 2 **Name**____________________________

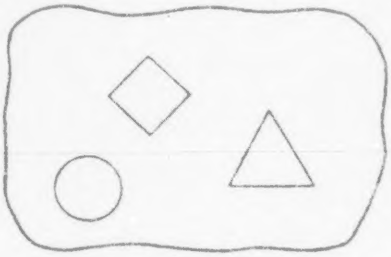
after page 9 of Sets • Numbers • Numerals 1.

Draw lines to show a one-to-one matching.

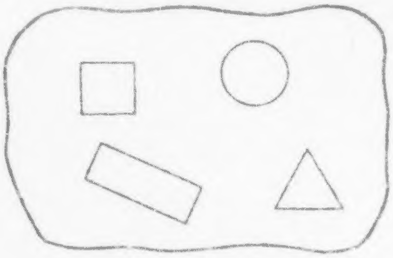




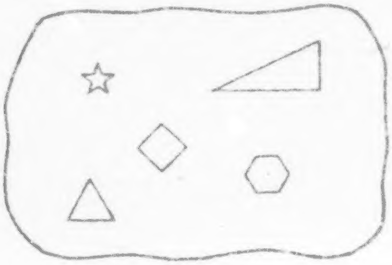
Draw a set that has fewer objects.



Draw a set that has more objects.



Draw a set that has the same number of objects.



Grade Level 1

Lesson No. 72

Text Pages 10

Lesson Topic: One-to-One Matching with Three Sets

Materials needed: Flannel board, cutouts

Purposes: To extend the pupils' concept of equivalent sets from two equivalent sets to a class of equivalent sets

Procedures:

I. Prebook Activities
   Draw 3 set outlines on the board, then follow directions as listed.

II. Using the page
   Read aloud the directions for the page. Have pupils work independently to complete the page. Pupils who need additional help may show the one-to-one matching with three equivalent sets of real objects.

Suggestions for the teacher:

Mathematical Background in Teacher's Edition

Grade Level 1

Lesson No. 73

Text Pages 11

Lesson Topic: Sets Having the Same Number

Materials needed: Four cutouts for flannel board

Purposes: To provide pupils practice in recognizing equivalent sets

Procedures:

I. Prebook Activities
Place a set of two cutouts on the flannel board, then follow directions as listed.

II. Using the page
Direct attention to the first row of sets and emphasize that the set on the left is called the model set. Read the directions aloud and complete this panel. Follow all directions closely.

Suggestions for the teacher:

Enrichment Activities: Follow as directed in Teacher's Edition on page 11.

Grade Level 1

Lesson No. 74

Text Pages 12

Lesson Topic: Checkup Time

Materials needed: None

Purposes: To provide pupils an opportunity to review the concepts of this unit and to evaluate their understanding for these concepts

Procedures:

I. Using the page
   Read aloud the directions for the first panel and allow time for the pupils to complete. Read the directions for the other panels.

II. Postbook Activities
   Analyze the pupils' performances on this checkup page.

Suggestions for the teacher:

After analyzing the pupils' performances some time should be given for expla tion of items which seemed difficult for the pupils on the review.

Grade Level 1

Lesson No. 75

Text Pages After p. 12

Lesson Topic: Independent Test 1

Materials needed: Copies of test

Purposes: To further check understanding of sets and one-to-one matching

Procedures:
I. Pass out copies of test.
II. Read directions.
III. Collect and check all papers for evaluation.

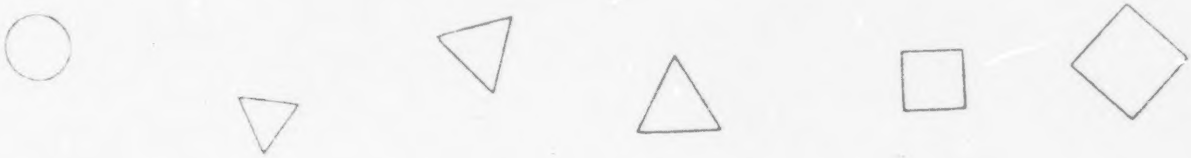
Suggestions for the teacher:
Weaknesses indicate further instruction needed.

Independent Test 1

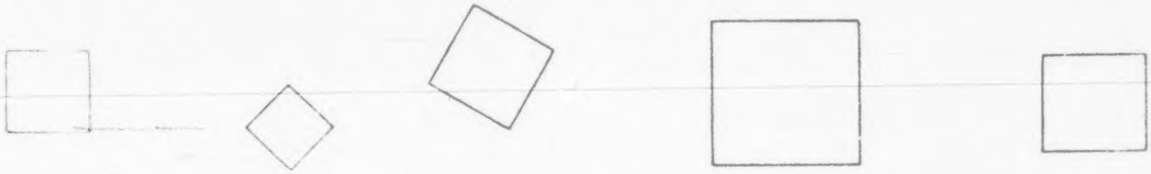
Name______________________________

pages 1-12 of Sets • Numbers • Numerals 1.

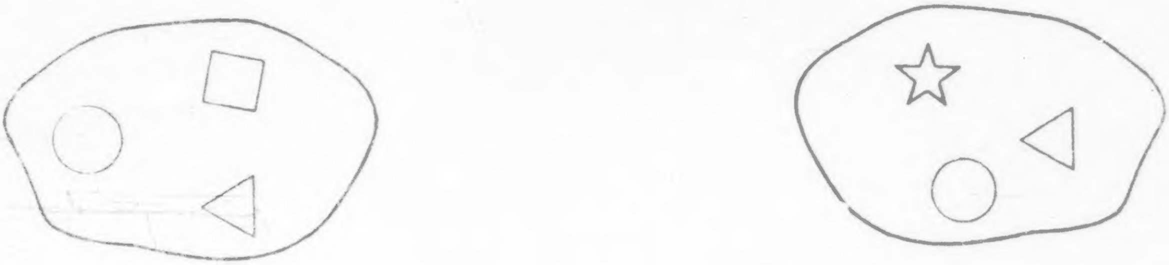
Draw a ring around the set of triangles (△).



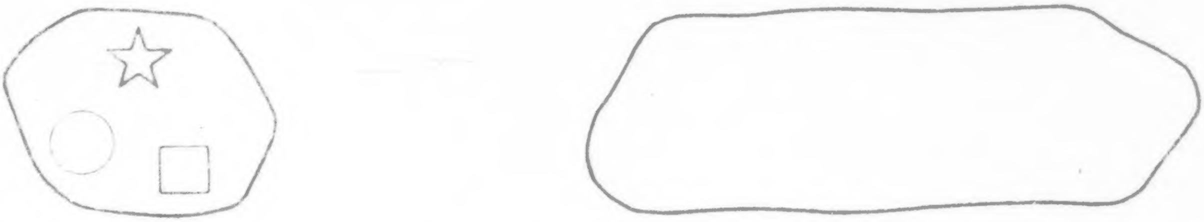
Mark an X on the largest square.



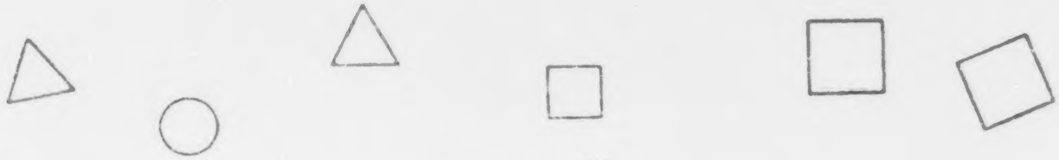
Draw lines to show a one-to-one matching.



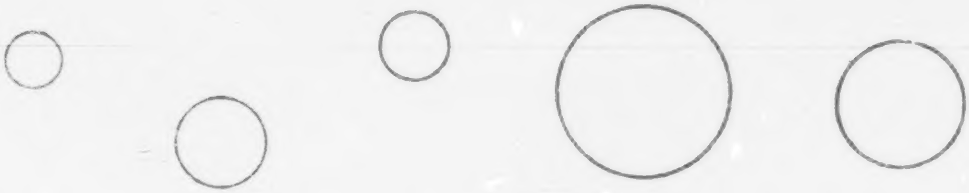
Draw a set having more objects.



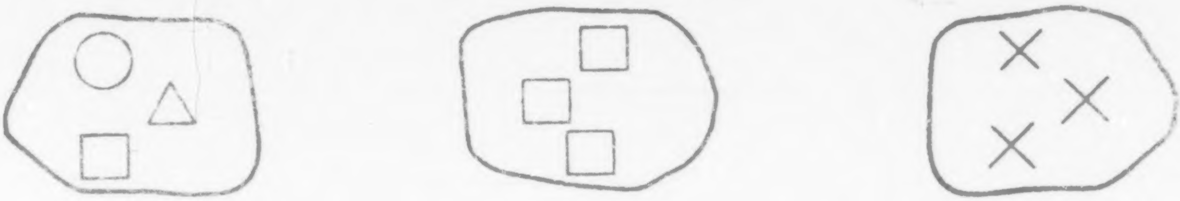
Draw a ring around the set of squares (□).



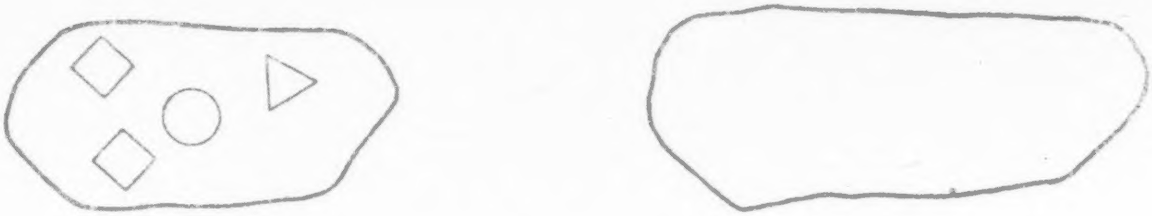
Mark an X on the smallest circle.



Draw lines to show the one-to-one matchings.



Draw a set having fewer objects.



Grade Level 1

Lesson No. 76

Text Pages 13

Lesson Topic: Number One and Numeral 1

Materials needed: Four cutouts of different things, yarn

Purposes: To help pupils understand and name the cardinal number one

Procedures:

I. Prebook Activities
   Show four unit sets, each having a different kind of cutout as its only member. Follow the directions as listed.

II. Using the page
   A. Direct attention to panel 1 and read the direction aloud.
   B. If some of the pupils experience difficulty in completing the pages, have them repeat the Prebook Activities with variations.

Suggestions for the teacher:

Mathematical Background in Teacher's Edition

Grade Level 1

Lesson No. 77

Text Pages 14

Lesson Topic: Number Two and Numeral Two

Materials needed: Eight different cutouts or objects for set demonstrations

Purposes: To help pupils understand and name the cardinal number two

Procedures:

I. Prebook Activities
    A. Begin by displaying 4 sets of 1 object each. Ask: What is the number of each set. (1)
    B. Point out that you will put 1 more object in each set, empahsizing one more object.

II. Using the page
    A. Direct attention to the top panel on page 14.
    B. Read the directions aloud.
    C. Ask a few oral questions to find out if the class really understands the work.
    D. Check each child's page.

Suggestions for the teacher:

Enrichment Activities: Use the Enrichment Activities as suggested in Teacher's Edition.

Grade Level 1

Lesson No. 78

Text Pages 15

Lesson Topic: Number and Numeral

Materials needed: Cutouts for flannel board

Purposes: To help pupils strengthen their understanding of the relationship between sets, numbers, and numerals

Procedures:

I. Prebook Activities
   A. Place the word card and numeral cards for the number one and two on the chalkboard.
   B. Have a pupil place either one or two objects on the board or he might draw pictures.
   C. Encourage class participation.

II. Using the page
   A. Read aloud the directions at the top of the page.
   B. Do the first exercise together.
   C. Check each child's book to see if he understands his work.
   D. Have the pupils do the other exercises in this section as independent activity.

Suggestions for the teacher:

Enrichment Activities: Follow the Postbook Activities that are suggested in Teacher's Edition, page 15.

Grade Level 1

Lesson No. 79

Text Pages 16

Lesson Topic: Number Three and Numeral 3

Materials needed: Twelve different cutouts or objects for set demonstrations

Purposes: To help pupils understand and name the cardinal number three

Procedures:

I. Prebook Activities
   A. Begin by displaying 4 sets of 2 objects each. Have pupils give the number of each set.
   B. Place one more object in each set and emphasize the "One more" idea.

II. Teaching the page
   A. Direct attention to the top panel on page 16.
   B. Read the directions aloud.
   C. Have pupils trace over the dashed matching line.
   D. Read aloud the directions for the other panels and have the pupils work independently.

Suggestions for the teacher:

Enrichment Activities: Follow Postbook Activities that are suggested in Teacher's Edition.

Grade Level 1

Lesson No. 80

Text Pages 17

Lesson Topic: Number of a Set

Materials needed: Numeral and word cards for 1, 2, 3 objects for set demonstration

Purposes: To provide pupils practice in associating number (as represented by sets), numerals, and number words

Procedures:

I. Prebook Activities
   A. Place the numeral cards and the word cards for the number one, two, and three on the board.
   B. Ask a pupil to select the numeral card which names the number of the set.
   C. Repeat this several times with different sets and different pupils.

II. Using the page
   A. Read aloud the directions at the top of the page.
   B. Ask pupils how many objects are in the first set.
   C. After the response "two" have them find and ring the numeral. Quickly check that everyone has done it right.

Suggestions for the teacher:

Enrichment Activities: Follow the Postbook Activities that are suggested in Teacher's Edition.

Grade Level 1

Lesson No. 81

Text Pages 17

Lesson Topic: Reveiw 3

Materials needed: Copies of review

Purposes: To review and evaluate understanding of numbers and numerals through three

Procedures:

I. Distribute copies of the review.
II. Have pupils follow oral directions.
III. Check all papers.

Suggestions for the teacher:
Review will indicate needed reteaching, if any.

Review 3 Name____________________

U   after page 17 of Sets • Numbers • Numerals 1.

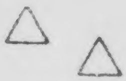
Trace the word. Write the numeral. Draw the set.

one ___

two ___

three ___

Write the numeral for the number of each set.



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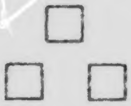
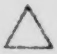
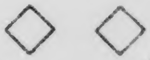






Draw a set of X's for each number.

X X X			
3	3	1	2
2	2	1	3

Grade Level 1

Lesson No. 82

Text Pages 18

Lesson Topic: Number and Numeral Four

Materials needed: Twelve different cutouts and yarn

Purposes: To help pupils understand and name the cardinal number four

Procedures:

I. Place 3 sets of 3 objects on flannel board, have pupils tell the number of each set, then add one more.
II. Emphasize equivalence of sets, and the number now, or 4.
III. Read directions on page with the children and let them work independently as directed.
IV. Supervise to see that all are following directions.

Suggestions for the teacher:

Postbook Activities, p. 18 for extra practice.

Grade Level 1

Lesson No. 83

Text Pages 19

Lesson Topic: Number, Number Word, and Numeral

Materials needed: Numeral and word cards through 4, and cutouts

Purposes: To provide practice for pupils in associating number and numeral and writing numerals

Procedures:

I. Place sets of 1 through four on board (or flannel board, or table) and have pupils select numeral first then number word for each set.

II. Repeat any that cause trouble.

III. Work page 19 independently as directed, reading directions with the children.

Suggestions for the teacher:

For additional practice and fun, follow Postbook Activity, page 19.

Grade Level 1

Lesson No. 84

Text Pages 20

Lesson Topic: Natural Order of Numbers

Materials needed: Colored chalk

Purposes: To help children understand the natural order of numbers 1, 2, 3, and 4

Procedures:

I. Draw four set outlines on the board and have different pupils draw objects and write the numeral for number of the sets in order one through four.
II. Emphasize also "non-equivalence" of set, as proved by matching lines, using colored chalk.
III. Find sets of more fewer; use terms greater and less when referring to numbers.
IV. Read aloud directions and allow time for pupils to finish each panel before proceeding to the next.
V. Check pupils work and provide similar extra practice pages if needed.

Suggestions for the teacher:

Postbook Activities, page 20

Grade Level 1

Lesson No. 84

Text Pages 20

Lesson Topic: Natural Order of Numbers

Materials needed: Colored chalk

Purposes: To help children understand the natural order of numbers 1, 2, 3, and 4

Procedures:

I. Draw four set outlines on the board and have different pupils draw objects and write the numeral for number of the sets in order one through four.
II. Emphasize also "non-equivalence" of set, as proved by matching lines, using colored chalk.
III. Find sets of more fewer; use terms greater and less when referring to numbers.
IV. Read aloud directions and allow time for pupils to finish each panel before proceeding to the next.
V. Check pupils work and provide similar extra practice pages if needed.

Suggestions for the teacher:
Postbook Activities, page 20

Grade Level 1

Lesson No. 85

Text Pages 21

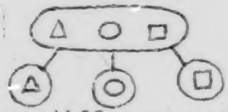
Lesson Topic: Subsets

Materials needed: Chalkboard

Purposes: To further develop the pupil's concept of sets within a set

Procedures:

I. Draw a chalkboard set, let child choose one and discover how many choices he has.



II. Repeat, giving two choices to discover how many different subsets can be made.

III. Panel 2 as directed to discover how subsets can be made.

Suggestions for the teacher:

Enrichment Activities may continue with sets of four to find all possible subsets (0 objects, 1 objects, 2 objects, 3 objects, 4 objects)

Grade Level 1

Lesson No. 86

Text Pages 22

Lesson Topic: Number Five and Numeral 5

Materials needed: 15 objects for set demonstrations

Purposes: To help pupils understand and name the cardinal number five

Procedures:

I. Prebook Activities
Begin by displaying 3 sets of 4 objects each. Follow the Prebook Activities very closely. (all)

II. Using the page
   - A. Direct the attention to the top panel. Read the directions aloud for each panel.
   - B. Have pupils work independently. Pupils who have difficulty should use sets of real objects and manipulate the objects to recreate the original situation.

Suggestions for the teacher:

Mathematical Backbround in Teacher's Edition on page 22

Grade Level 1

Lesson No. 87

Text Pages 23

Lesson Topic: Number, Number Word, and Numeral

Materials needed: Word and numeral cards 1-5

Purposes: To help pupils strengthen their understanding of the relationship between number, number words, and numerals

Procedures:

I. Prebook Activities
   - A. Place the word cards and numeral cards for the numbers one through five on the board.
   - B. Draw a set of three objects on the board and ask one of your pupils to come forward and select the numeral card for this set.
   - C. Repeat this activity for sets of one, two, four and five objects.

II. Using the page
   - A. Read aloud the direction at the top of the page.
   - B. Do a demonstration similar to the exercise in the book to determine if the pupils understand what they are to do.
   - C. Check each child's work inidividually.
   - D. Let the pupils work independently.

Suggestions for the teacher:

Enrichment Activities: Follow the Postbook Activities and Mathematical Background that are suggested in Teacher's Edition.

Grade Level 1

Lesson No. 88

Text Pages 24

Lesson Topic: Number Six and Numeral Six

Materials needed: Eighteen Objects for set demonstrations

Purposes: To help the pupils understand and name the cardinal number six

Procedures:

I. Use the "one more" idea in forming sets of six from sets of five.
II. Emphasize "what is alike?" "Are the sets equivalent or non-equivalent?" "What is the number of each set", after pairing with matching lines.
III. Direct the children by reading directions aloud and allowing time to complete each panel. (page 36)
IV. Check and have any mistakes corrected.

Suggestions for the teacher:

Enrichment Activities, page 24

Grade Level 1

Lesson No. 89

Text Pages 25

Lesson Topic: Number of a Set

Materials needed: Word and numeral cards 1-6, ten flannel board cutouts

Purposes: To strengthen the pupils' concept of the cardinal numbers one through six

Procedures:

I. Prebook Activities
   Follow Prebook Activities very closely. Repeat this several times using all numerals 1-6.

II. Using the page
   A. Direct attention to the top half of the page.
   B. The pupils may read the directions aloud since this type of exercise has been previously done.

Suggestions for the teacher:

Enrichment Activities: Use the activities as suggested in Teacher's Edition

Grade Level 1

Lesson No. 90

Text Pages After page 25

Lesson Topic: Review 4

Materials needed: Copies of review

Purposes: To evaluate understanding of cardinal numbers and numerals through 6

Procedures:

I. Distribute review copies.
II. Read aloud directions to pupils and have them follow.
III. Have pupils pass in papers.
IV. Check all papers and discover weaknesses and any need for further instruction.

Suggestions for the teacher:

Review 4 **Name** ______________________________

"se after page 25 of Sets • Numbers • Numerals 1.

Trace the word. Write the numeral. Draw the set.

four ___

five ___

six ___

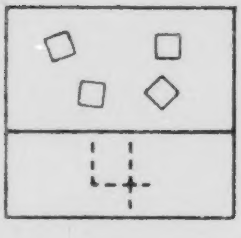
Write a numeral in each ___ to show "one more" order.

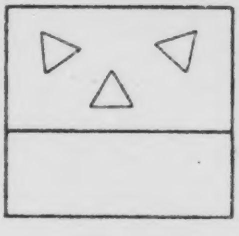
1, 2, ___, ___, ___, ___

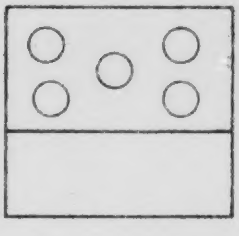
___, ___, 3, 4, ___, ___

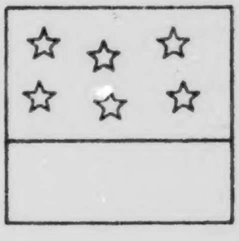
1 , ___, ___, ___, ___, 6

Write the numeral for the number of each set.









Grade Level 1

Lesson No. 91

Text Pages 26

Lesson Topic: Meaning of Numerals

Materials needed: Blocks or cards labeled A, B, C, D, E, F, and G

Purposes: To help pupils develop skill in selecting a subset containing six or fewer objects

Procedures:

I. Place blocks on table and let pupils pick sets of: one, two, three, and so on. Emphasize there are always several choices and that each of them is acceptable so long as the "number" is correct.

II. Read directions and emphasize that children may make any choice so long as the number chosen is correct.

III. If pupils experience difficulty, repeat corresponding part of Prebook Activities or perhaps use flannel board and felt cutouts and yarn to define sets.

Suggestions for the teacher:
Enrichment Activities, page 26

Grade Level 1

Lesson No. 92

Text Pages 27

Lesson Topic: Ordinals

Materials needed: Six different objects

Purposes: To help develop an understanding of the ordinals first through sixth

Procedures:

I. Place objects on chalkrail. Begin at left and have each object assigned a numeral and a number word.
II. Ask which was counted first and write "first" below the one. Continue until each object is assigned a numeral, the number word, and the ordinal word.
III. Repeat the entire activity, first having the objects face the right so that first will fall on the right.
IV. Use the page as suggested in Teacher's manual, page 27.

Suggestions for the teacher:

Postbook Activities, page 27

Pass out ordinal words and let children arrange them, (3 times) as the word suggests, first facing forward, second facing left, and then facing right

Grade Level 1

Lesson No. 93

Text Pages 28

Lesson Topic: Ordinals

Materials needed: Six different objects

Purposes: To further develop pupils understanding of the ordinals first through six

Procedures:

I. Prebook Activities
   Follow Prebook Activities very close.

II. Using the page
   A. Have pupils count the children in panel one from left to right.
   B. Read the directions aloud for each panel, allow time for pupils to mark an x on the fifth child in panel one.
   C. Read the directions for the other panels. Check the page.

Suggestions for the teacher:

Enrichment Activities: Use Postbook Activities in Teacher's Edition on page 28.

Grade Level 1

Lesson No. 94

Text Pages 29

Lesson Topic: Ordinals

Materials needed: 6 cards, each with a different geometrical shape,

word cards first - six, a set of ordinals

Purposes: To reinforce pupils' understanding of the ordinals first through sixth

Procedures:

I. Prebook Activities

Follow this activity very closely. Be sure to have all different geometrical shapes.

II. Using the page

A. Read the directions at the top of the page.

B. Pupils who have difficulty should write numerals above the pictures in each panel to help them determine the position of the picture marked with an x.

C. Check the page.

Suggestions for the teacher:

Postbook Activities in Teacher's Edition on page 29

Grade Level 1

Lesson No. 95

Text Pages 30

Lesson Topic: Number Seven and Numeral 7

Materials needed: Seven chairs, seven books

Purposes: To help pupils understand and name the cardinal number seven

Procedures:

I. Prebook Activities
   - A. Follow this activity very closely.
   - B. Be sure to emphasize that what is alike about each of these sets is what we call the number seven.

II. Using the page
   - A. Direct the attention to the top panel and read the directions aloud and have pupils trace over the matching lines.
   - B. Read all directions aloud.
   - C. Check the page.

Suggestions for the teacher:

Mathematical Background and Enrichment Activities in Teacher's Edition on page 30

Grade Level 1

Lesson No. 96

Text Pages 31

Lesson Topic: Number and Numeral

Materials needed: Numeral cards 1-7, seven flannel board cutouts

Purposes: To help pupils strengthen their understanding of the relationship between number and numeral for sets containing seven or fewer members

Procedures:

I. Prebook Activities
   Follow this activity very closely.

II. Using the page
   - A. Read aloud the directions for the first two panels.
   - B. Have pupils work independently and allow time for them to finish these panels before using a similar procedure for the last two panels.
   - C. Check the page.

Suggestions for the teacher:

Mathematical Background in Teacher's Edition on page 31

Grade Level 1

Lesson No. 97

Text Pages 32

Lesson Topic: Number Eight and Numeral 8

Materials needed: Eight chairs, eight books

Purposes: To help pupils understand and name the cardinal number eight

Procedures:

I. Prebook Activities
    - A. Follow this activity very closely.
    - B. Emphasize that what is alike about all these sets is what we call the number **eight**.

II. Using the page
    - A. Direct the attention to the top panel and read the directions aloud. Have pupils trace over the matching lines. Give help if needed.
    - B. Encourage **pupils** to do the rest of the page independently.
    - C. Check the page.

Suggestions for the teacher:

Mathematical Background in Teacher's Edition on page 32

Grade Level 1

Lesson No. 98

Text Pages 33

Lesson Topic: Number and Numeral

Materials needed: Eight flannel board cutouts

Eight objects for set demonstrations

Purposes: To help pupils strengthen their understanding of relationship between number and numeral for sets containing eight or fewer members

Procedures:

I. Prebook Activities
   A. Follow the Prebook Activities very closely.
   B. Repeat the activities several times using both cutouts and real objects.

II. Using the page
   A. Read the directions aloud.
   B. Do the first exercise together.
   C. Repeat the directions.
   D. Check the page.

Suggestions for the teacher:

Mathematical Background and the Enrichment Activities in Teacher's Edition on page 33

Grade Level 1

Lesson No. 99

Text Pages 34

Lesson Topic: Number Nine and Numeral 9

Materials needed: Nine books

Purposes: To help pupils understand and name the cardinal number nine

Procedures:

I. Prebook Activities
   Follow Prebook Activities very closely.

II. Using the page
   - A. Direct attention to the top panel, read the directions aloud, and have pupils trace over or suggest the directions for the remaining two panels.
   - B. Help them if necessary and have the pupils proceed independently.
   - C. Check the page.

Suggestions for the teacher:

Postbook Activities on page 34 in Teacher's Edition

Grade Level 1

Lesson No. 100

Text Pages 35

Lesson Topic: Number and Numeral

Materials needed: Nine flannel board cutouts

Numeral cards 1-9

Purposes: To help pupils strengthen their understanding of the relationship between number and numeral for sets containing nine or fewer mumber

Procedures:

I. Prebook Activities
   - A. As you displace the following sets ask pupils to give the number of each set.
   - B. Have them write the numeral for the number on their papers.
   - C. Then have a pupil write it on the board so they can check their answer.

II. Using the page
   - A. Have pupils read or suggest the content of the directions.
   - B. Make any clarification necessary in their directions.
   - C. Encourage the pupils to do the page by themselves.

Suggestions for the teacher:

Enrichment Activities: Use the Postbook Activities suggested in Teacher's Edition.

Grade Level 1

Lesson No. 101

Text Pages After p. 35

Lesson Topic: Review 5

Materials needed: Copies of review

Purposes: To review cardinal numbers and numerals through nine

Procedures:

I. Pass out review copies.
II. Have children proceed as directions are read aloud.
III. Collect and check all papers.

Suggestions for the teacher:

Results will indicate if there is need for further instruction.

Review 5 Name ____________________
Use revised edition

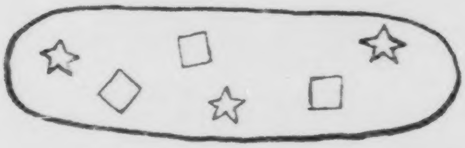
Trace the word. Write the numeral. Draw the set.

seven ___

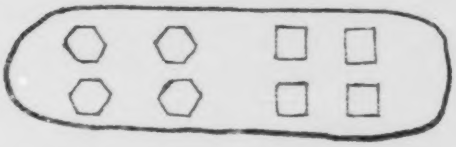
eight ___

nine ___

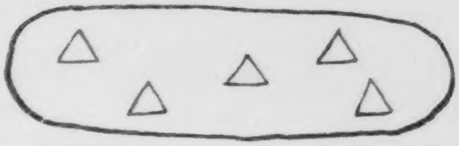
Match each word with a set and with a numeral.



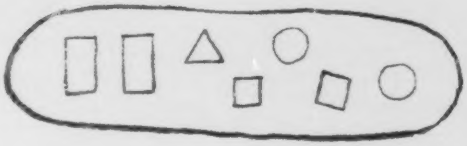
nine 7



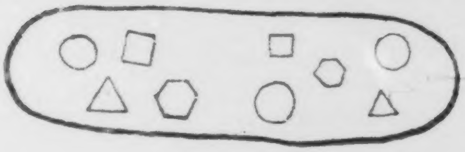
six 9



eight 6



five 8



seven 5

Grade Level 1

Lesson No. 102

Text Pages 36

Lesson Topic: Natural Order of Numbers

Materials needed: Numeral cards 1-9

Purposes: To extend the pupil's understanding of the natural order of numbers

Procedures:

- I. Prebook Activities
    - A. Follow Prebook Activities very closely, page 34, letting the children take turns in rearranging the cards so that they name the numbers from least to greatest. (from left to right)
    - B. Let different pupils write the correct numerals below each set.
- II. Using the page
    - A. Find page 34. (Write on board)
    - B. Read aloud the directions for the first part of the page.
    - C. Make sure that pupils understand what they are to do.
    - D. Check each pupil's work very closely.

Suggestions for the teacher:

Enrichment Activities: Use Postbook Activities as suggested in Teacher's Edition, page 36.

Grade Level 1

Lesson No. 103

Text Pages 37

Lesson Topic: Natural Order of Numbers

Materials needed: Numeral cards 1-9

Purposes: To extend pupil's understanding of the natural order of numbers

Procedures:

I. Prebook Activities
   - A. Place the numeral cards on the chalkboard in any scrambled arrangement.
   - B. Ask a pupil or a team of pupils to arrange the cards' name numbers in "one more" order from left to right.
   - C. Encourage group participation.
   - D. Follow Prebook Activities very closely.

II. Using the page
   - A. Write the page number on the board and tell pupils to find it in their books.
   - B. Read aloud the directions for the top portion of the page.
   - C. Make sure that pupils understand what they are to do.
   - D. Encourage pupils to work on their own.

Suggestions for the teacher:

Enrichment Activities: Use Postbook Activities that are suggested in Teacher's Edition, page 37.

Grade Level 1

Lesson No. 104

Text Pages 37

Lesson Topic: Review 6

Materials needed: Copies of review for each pupil

Purposes: To review natural order of numbers through nine

Procedures:

I. Distribute copies of the review to each pupil.
II. Have them work independently as directed.
III. Results will indicate weaknesses and whether or not there is a need for further instruction.

Suggestions for the teacher:

Review 6 37 Revised Edition **Name**____________________

Use after page [illegible] of Sets · Numbers · Numerals 1.

Write a numeral in each ___ to show "one more" order.

2, ___, 4

5, ___, 7

___, 8, ___

___, 7, ___

4, ___, 6, ___

___, 7, 8, ___

___, ___, 3, 4

5, ___, ___, ___

Write a numeral in each ___ to show "one less" order.

6, ___, 4

3, ___, 1

___, 8, ___

___, 6, ___

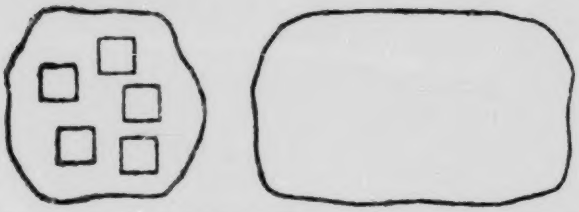
7, ___, 5, ___

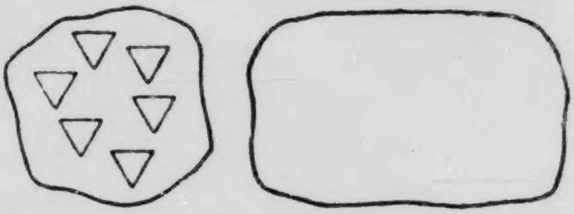
___, 4, 3, ___

___, ___, 7, 6

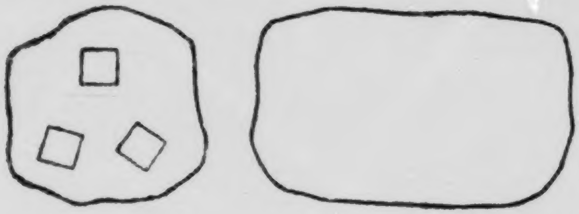
8, ___, ___, ___

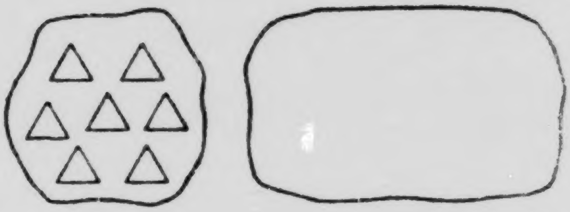
Draw a set having one more object than the given set.





Draw a set having one less object than the given set.





Grade Level 1

Lesson No. 105

Text Pages 38

Lesson Topic: Number Zero and Numeral 0

Materials needed: Three flannel board cutouts, yarn

Purposes: To help pupils understand and name the cardinal number zero

Procedures:

I. Prebook Activities
   - A. Follow Prebook Activities very closely.
   - B. Continue to ask questions about different cutouts that you have displayed on the board to see if the pupils are able to tell how many objects are in each set.
   - C. Check pupils responses very closely.

II. Using the page
   - A. Have the children open their books to page 37.
   - B. Direct attention to the first three panels and read the directions aloud.
   - C. Check pupil's papers to see if they are following the right procedures.
   - D. Have the pupils complete the page individually.

Suggestions for the teacher:

Enrichment Activities: Use Postbook Activities that are suggested in Teacher's Edition.

Grade Level 1

Lesson No. 106

Text Pages 39

Lesson Topic: Number, Number Word, and Numeral

Materials needed: Nine flannel board cutouts, word and numeral cards 0-9

Purposes: To help pupils strengthen their understanding of the relationships of sets, numbers, and numerals

Procedures:

I. Prebook Activities
   A. Place numeral and word cards in any arrangement on the board.
   B. Have a pupil to place as many cutouts as he pleases on the board. (It may be from 0-9)
   C. Let another pupil choose the correct numeral card and hold it up for the class to see.
   D. Repeat this activity until each number 0-9 has been used.

II. Using the page
   A. Read aloud the directions.
   B. Check each pupil's book to see if they understand what to do.
   C. Have the pupils complete the page by themselves.

Suggestions for the teacher:

Enrichment Activities: Follow the Postbook Activities suggested in Teacher's Edition.

Grade Level 1

Lesson No. 107

Text Pages 40

Lesson Topic: Number, Number Word, and Numeral

Materials needed: Nine flannel board cutouts, word and numeral cards 0-9

Purposes: To strengthen pupil's understanding of the relationship of number, number word, and numeral

Procedures:

I. Prebook Activities
   A. Show ten sets on the chalkboard representing the numbers zero throug nine.
   B. Draw a square shaped outline for each set and use dots to represent the members of the sets etc.
   C. Have a pupil write the numeral 0 above that set.
   D. Repeat this procedure until each numeral 0-0 is associated with a set of dots.

II. Using the page
   A. Read the directions aloud.
   B. Check each pupil's book for the first panel.
   C. Tell pupils they may refer to the number words on the board.
   D. Have pupils complete the page by themselves.

Suggestions for the teacher:

Enrichment Activities: Follow the Postbook Activities listed in Teacher's Edition.

Grade Level 1

Lesson No. 108

Text Pages 41

Lesson Topic: Number, Number Words, and Numeral

Materials needed: A prepared ditto sheet as indicated in Prebook Activities

Purposes: To strengthen pupil's understanding of the relationship of number, number word, and numerals

Procedures:

I. Prebook Activities
Prepare a ditto sheet showing a table like the one indicated below for number words one through nine.

Number Word	Set	Numeral
Zero		
One		

II. Using the page
   A. Read the directions aloud.
   B. Check the page.

Suggestions for the teacher:

Postbook Activities on page 41 in Teacher's Edition

Grade Level 1

Lesson No. 109

Text Pages 42

Lesson Topic: Checkup Time

Materials needed: None

Purposes: To provide pupils an opportunity to review the concepts of this unit and to evaluate their understanding of these concepts

Procedures:

Using the page

Read aloud the directions for the first panel. Allow time for the pupils to complete this panel individually. Read aloud the directions for the rest of the page.

Suggestions for the teacher:

Postbook Activities in Teacher's Edition on page 42

Grade Level 1

Lesson No. 110

Text Pages After p. 42

Lesson Topic: Independent Test 2

Materials needed: Copies of the test for each pupil

Purposes: To evaluate understanding of numbers through 9

Procedures:
I. Pass out test copies.
II. Direct pupils to follow oral instructions for taking the test.
III. Check all papers and diagnose weaknesses.

Suggestions for the teacher:

Further instructions may be needed as test results may indicate.

Independent Test 2

For pages 13-38 of Sets • Numbers • Numerals 1.

Name____________________________

Complete the following.

Number	Word	Numeral
● ● ● ● ● ●	________	___
	eight	___
	________	2
● ● ● ●	________	___
	three	___
	________	9

Complete each row to show "one more" order.

0, 1, ___, ___, 4, ___, ___

___, 4, 5, ___, ___, ___, ___

2, ___, ___, ___, ___, ___, ___

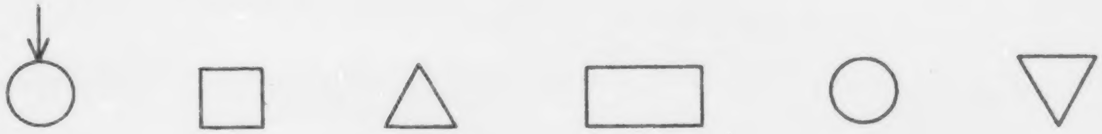
Complete each row to show "one less" order.

8, 7, ___, ___, 4, ___, ___

6, 5, ___, 3, ___, ___, ___

___, ___, ___, 6, ___, ___, ___

Start at the ↓.
Mark an X on the third figure.
Draw a line under the fourth figure.
Draw a ring around the sixth figure.



Grade Level 1

Lesson No. 111

Text Pages 43

Lesson Topic: Joining Sets

Materials needed: Three flannel board cutouts, numerals 1, 2, 3 for flannel board

Purposes: To help pupils understand the relationship between joining sets and adding numbers

Procedures:

I. Prebook Activities
   A. Follow Prebook Activities very close.
   B. Repeat the activity for a set of one object and a set of two objects

II. Using the page
   A. Read aloud the directions for the first panel.
   B. Have each pupil manipulate objects at his desk to simulate the set joinings shown in the first panel.
   C. Read the directions for the rest of the page.

Suggestions for the teacher:

Postbook Activities in Teacher's Edition on page 43

Grade Level 1

Lesson No. 112

Text Pages 44

Lesson Topic: Numerals for Three

Materials needed: Number strips, envelopes

Purposes: To help develop the concept of several numerals for three

Procedures:

I. Prebook Activities

Have pupils get the number strips and the number line strips from the storage pocket.

II. Using the page

A. Arrange strips as shown in panel one, p. 44.

B. Emphasize the fact that 1 + 2, 2 + 1 are called numerals for three.

C. Teach "3" as the simplest numeral for three; it is the eaisest to write.

D. For the other panels, read aloud directions and allow time for completion.

Suggestions for the teacher:

Pupils who have trouble should use number line strips with real objects to make correct responses.

Have pupils write the words one, two, and three on paper, and then write all the numerals they can for each number.

Grade Level 1

Lesson No. 113

Text Pages 45

Lesson Topic: Using the Equal Sign

Materials needed: Number strips, number line strips

Purposes: To help the pupils understand the meaning and use of the equal sign

Procedures:

I. Prebook Activities
   Have pupils select from their set of number strips a 1 strip, a 2 strip, and the horizontal number 1 strip for the numbers 1 through 10.

II. Teaching the lesson
   - A. Place strips as shown in first 2 panels and note since 1 + 2 and 3; 2 + 1 and 3. Naming the same number we write 1 + 2 = 3; 2 + 1 = 3.
   - B. Place strips as shown in bottom examples, copy the algorisms on the board writing the sum 3, and 1 plus 2 equals 3, 2 plus 1 equals 3.
   - C. Have the pupils complete the last panel independently following oral directions and using the number strips when needed.

Suggestions for the teacher:

A sentence 1 + 2 = 2 + 1 is an instance of the commutative property of addition which states that the order of addition of two numbers does not change the sum.
Postbook Activities, page 45

Grade Level 1

Lesson No. 114

Text Pages 46

Lesson Topic: Joining and Separating Sets

Materials needed: Flannel board cutouts, number strips

Purposes: To discover and understand the subtraction combinations and relationship to the addition combinations of three

Procedures:

I. Prebook Activities
   A. Discuss briefly the "do-undo" relationship of many of our daily activities. Let the pupils demonstrate sit down-standup, open the door-close the door, etc.
   B. Use flannel board to show "do" and discover "undo" having pupils participate in the operation.
   C. Repeat Prebook Activities if necessary. Clear terminology is vitally important at this time.

II. Teaching the page
   A. Discuss 1st two panels as a group activity, using teaching suggestions.
   B. Proceed with remaining two panels independently as directed.

Suggestions for the teacher:

Pupils who have difficulty should use set of real objects.
Postbook Activities, page 46

Grade Level 1

Lesson No. 115

Text Pages 47

Lesson Topic: Practice in Solving Equations

Materials needed: Number strips, number line strips

Purposes: To help pupils understand that = may be located in different position in an equation

Procedures:

I. Prebook Activities
   Follow all the procedures as printed.

II. Using the page
   A. Read the directions aloud and relate the Prebook Activities to the first panel.
   B. Check along as the children work to see if they understand.

Suggestions for the teacher:

Postbook Activities on page 47 in Teacher's Edition

Grade Level 1

Lesson No. 116

Text Pages 48

Lesson Topic: Solving Equations

Materials needed: Three books

Purposes: To guide pupils in the use of addition and subtraction equations

Procedures:

I. Prebook Activities
   A. Follow **the** Prebook Activities very closely.
   B. Use all examples given.

II. Teaching the page
   A. Have pupils study the pictures in the first panel.
   B. Proceed with the questions.
   C. Read aloud the directions for the last panel and have the pupils work independently.
   D. Pupils should use real objects or number strips if the encounter difficulty.
   E. Check the page.

Suggestions for the teacher:

Mathematical Background on page 48 in Teacher's Edition

Grade Level 1

Lesson No. 117

Text Pages 49

Lesson Topic: Addition and Subtraction Practice

Materials needed: Number strips

Purposes: To help pupils develop skill in adding and subtracting numbers

Procedures:

I. Prebook Activities
   Follow this activity closely.
II. Using the page
   A. Read the directions aloud for the first panel and solve the first equation as a class activity.
   B. Then have pupils complete this panel as an independent activity.
   C. Read the directions for the center and bottom panel.
   D. Check the page.

Suggestions for the teacher:

Postbook Activities on page 49 in Teacher's Edition

Grade Level 1

Lesson No. 118

Text Pages After p. 49

Lesson Topic: Review 9

Materials needed: Copies of the review

Purposes: To review and diagnose learning of addition and subtraction through 3

Procedures:

I. Distribute copies of the review to each pupil.
II. Proceed as directed orally.
III. Evaluate results.

Suggestions for the teacher:

Reteaching should follow the review if needed.

Review 9 49 Revised [illegible] **Name** ______________________

se after page [illegible] of Sets • Numbers • Numerals 1.

Write the simplest numeral in each $\square$.

$\square = 2 + 1$ $3 - \square = 2$

$\square = 3 - 2$ $2 + \square = 3$

$\square = 1 + 1$ $2 - \square = 1$

$1 + 2 = \square$ $\square - 2 = 1$

$2 - 1 = \square$ $\square + 1 = 2$

$3 - 1 = \square$ $\square + 1 = 3$

Write the simplest numeral in each .

$\begin{array}{r} 1 \\ +\,2 \\ \hline \end{array}$ $\begin{array}{r} 1 \\ +\,1 \\ \hline \end{array}$ $\begin{array}{r} 2 \\ +\,1 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ -\,2 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ -\,1 \\ \hline \end{array}$

$\begin{array}{r} 3 \\ - \quad \\ \hline 2 \end{array}$ $\begin{array}{r} \\ +\;1 \\ \hline 2 \end{array}$ $\begin{array}{r} 1 \\ + \quad \\ \hline 3 \end{array}$ $\begin{array}{r} 3 \\ - \quad \\ \hline 1 \end{array}$ $\begin{array}{r} \\ -\;1 \\ \hline 1 \end{array}$

Grade Level 1

Lesson No. 119

Text Pages 50

Lesson Topic: Writing Equations

Materials needed: Three flannel board cutouts

Purposes: To help pupils translate pictorial problems situations into equations

Procedures:

I. Prebook Activities
   - A. Have 3 pupils stand before the class so that 1 pupil is 8 feet away from the other 2 who are standing beside each other.
   - B. Have pupils name the number of each set.
   - C. Ask several questions about the sets.

II. Teaching the page
   - A. Read the directions aloud.
   - B. Do the first panel as a class activity.
   - C. Have the pupils complete the page on their own.

Suggestions for the teacher:

Enrichment Activities: Have pupils give dramatization of each equation.
Mathematical Background in Teacher's Edition page 50

Grade Level 1

Lesson No. 120

Text Pages 51

Lesson Topic: Sums of Four

Materials needed: Four flannel board cutouts

number strips

Purposes: To help pupils discover and understand the addition combinations of four

Procedures:

I. Prebook Activities
    A. Display a set of one and a set of three on the flannel board.
    B. Have the pupils tell the number of each set.
    C. Join the set of three to the set of one by moving the three objects to show the joining.
    D. Ask several pupils to write an equation on the board to describe the sets (1 + 3 = 4) (4 = 1 + 3)

II. Teaching the page
    A. Read the directions at the top of the page aloud.
    B. Instruct the pupils to use their number strips as an aid in solving the equations necessary.
    C. Give individual help where needed.

Suggestions for the teacher:

Enrichment Activities: Follow Postbook Activities that are suggested in Teacher's Edition.

Grade Level 1

Lesson No. 121

Text Pages 52

Lesson Topic: Subtraction Combinations of four

Materials needed: Number strips

Purposes: To strengthen the pupil's concept of the relationship between addition and subtraction, particularly with the subtraction combinations of four

Procedures:

I. Prebook Activities
   A. Have pupils select all number strips for the numbers one through three and the number line strip.
   B. Follow very closely the procedure that is listed in Teacher's Edition.

II. Teaching the page
   A. Read aloud the directions at the top of the page.
   B. Have children use their number strips to solve each equation. (Check each child's page to see if he understands.)
   C. Let the children work the last two panels as an individual activity.

Suggestions for the teacher:

Enrichment Activities: Follow closely the activities that are suggested in Teacher's Edition, page 52.

Grade Level 1

Lesson No. 122

Text Pages 53

Lesson Topic: Sums of Five

Materials needed: Five objects for set demonstrations

Purposes: To help discover and understand the addition combinations of five

Procedures:

I. Prebook Activities
   - A. Display a set of 2 objects and a set of 3 objects.
   - B. Have pupils tell the number of each set.
   - C. Join the set of 3 objects to the set of 2 objects by moving the three objects.
   - D. Have pupils tell the number of the set.
   - E. Encourage group participation.

II. Teaching the page
   - A. Read aloud the directions at the top of the page.
   - B. Have pupils manipulate objects at their desks to perform the set joining.
   - C. Urge pupils to complete.

Suggestions for the teacher:

Enrichment Activities: Refer to Postbook Activities listed in Teacher's Edition on page 53.

Mathematical Background

Grade Level 1

Lesson No. 123

Text Pages 54

Lesson Topic: Subtraction Combinations of Five

Materials needed: Number strips

Purposes: To strengthen the pupil's concept of the relationship between addition and subtraction, particularly with subtraction combinations of five

Procedures:

I. Prebook Activities
   Follow Prebook Activities very closely. Be sure to use number strips or other objects.

II. Using the page
   - A. Point out that the number strip display at the top of the page is a picture of what the pupil has just developed.
   - B. Read aloud the directions for the rest of the page and have pupils work independently.
   - C. Check the page.

Suggestions for the teacher:

Postbook Activities on page 54 in Teacher's Edition

Grade Level 1

Lesson No. 124

Text Pages 55

Lesson Topic: Addition and Subtraction Practice

Materials needed: Numeral cards (one through five)

Cards bearing +, -, =, Blank card elliptical shape

Purposes: To improve the pupil's computational skills with addition and subtraction

Procedures:

I. Prebook Activities
    A. Place cards on the board as follows (1) (+) (2) = ( )
    B. Call on a pupil to select the card with 3 on it to replace the blank card.
    C. Call on another pupil to read the sentence in two ways. (One plus two is equal to three.) (1 + 2 names the same number as three.)
    D. Vary this activity to include other addition and subtraction.
    E. Encourage each pupil to participate.

II. Using the page
    A. Read aloud the directions for each panel.
    B. Let the pupils complete the page independently.
    C. Give special help where needed.

Suggestions for the teacher:

Enrichment Activities: Follow Postbook Activities in Teacher's Edition.

Grade Level 1

Lesson No. 125

Text Pages After p. 55

Lesson Topic: Review 10

Materials needed: Copy for each pupil

Purposes: To review addition and subtraction learning through four

Procedures:

I. Pass each pupil a copy of the review.
II. Read directions and have pupils work independently.
III. Check all papers and evaluate results.

Suggestions for the teacher:
Review will indicate any need for further instruction.

Review 10 55 - Revised Edition **Name** ____________________

I after page [illegible] of Sets • Numbers • Numerals 1

Write the simplest numeral in each □.

3 + 1 = □

2 + 2 = □

1 + 4 = □

2 + 3 = □

4 − 1 = □

4 − 2 = □

5 − 4 = □

5 − 3 = □

□ + 3 = 4

1 + □ = 5

3 + □ = 5

□ + 2 = 4

5 − □ = 2

□ − 1 = 3

2 − □ = 1

□ − 2 = 1

Write + or − in each ● to make the sentence true.

3 ● 2 = 5

3 ● 2 = 1

4 ● 1 = 5

4 ● 1 = 3

2 ● 1 = 1

2 ● 1 = 3

3 ● 1 = 4

3 ● 1 = 2

Grade Level 1

Lesson No. 126

Text Pages 56

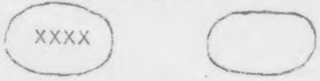
Lesson Topic: Zero in Addition and Subtraction

Materials needed: Five objects for set demonstrations

Purposes: To help pupils discover and understand the special properties of zero in connection with addition and subtraction

Procedures:

I. Prebook Activities
Draw the following on the chalkboard



Have pupils tell the number of each set. Follow the rest of the directions as given.

II. Using the Page
Read aloud the directions for each panel. Check the page

Suggestions for the teacher:
Note: Postbook activities on page 56 in Teachers' Edition.

Grade Level 1

Lesson No. 127

Text Pages 57

Lesson Topic: Names for Numbers

Materials needed: Numeral Cards

Five objects for set demonstration

Purposes: To help pupils strengthen the concepts of many names for a number

Procedures:

I. Prebook Activities
   a. Distribute all 46 of your numeral cards at this point. (Display a set of three objects.)
   b. Ask for the number of the set.
   c. The pupil that has the card should be allowed to place the card on the board.

II. Using the Page
   a. Read the directions aloud.
   b. Have pupils tell how many objects are in the first set in panel one. (Check to see if anyone needs help.)
   c. Have pupils do the last exercise in panel one independently. (Check their work)

Suggestions for the teacher:
Enrichment Activities
Follow procedures listed in Teachers' Edition page 57.

Grade Level 1

Lesson No. 128

Text Pages 58

Lesson Topic: Addition-Subtraction Table

Materials needed: None

Purposes: To help pupils understand the construction and use of an addition-subtraction table

Procedures:

I. Prebook Activities

Draw the addition table, as shown below, on the board. Have pupils write the simplest numeral for each given sum in the appropriate square.

+	0	1	3
0	0+1 1		
1			1+2 3
2	2+1 3		
3			

II. Using the Page

Read the directions aloud and let the pupils work independently. The use of the table is explained in the Mathematical Background.

Suggestions for the teacher:

Note: Mathematical Background on page 58.

Grade Level 1

Lesson No. 129

Text Pages 59

Lesson Topic: Addition and Subtraction Practice

Materials needed: Number strips and number line strip

Purposes: To help pupils improve their computational skills in addition and subtraction

Procedures:

I. Prebook Activities
   A. Write the number words two, three, four and five on the board.
   B. For each word have different pupils come to the board and write a different numeral.
   C. Review what is meant by the simplest numeral for a number. (See Mathematical Background.)

II. Using the Page
   A. Read the directions aloud for panel one, and do the first exercise as a class activity
   B. Check pupils' work very closely.
   C. Have pupils complete the page independently.

Suggestions for the teacher:

Enrichment Activities:

As an oral review, use the addition and subtraction numeral cards for the number two through five.

Grade Level 1

Lesson No. 130

Text Pages 60

Lesson Topic: Checkup Time

Materials needed:

Purposes: To provide an opportunity to review the concepts of this unit and to evaluate their understanding of these concepts

Procedures:

I. Using the Page
   A. Read aloud the directions for each panel.
   B. Caution pupils to observe the + and - signs.

II. Postbook Activities
   A. Check the answers and analyze the pupils' performance on this checkup page.
   B. Do any necessary reviewing and reteaching, using number strips, numeral cards and other devices.

Suggestions for the teacher:

Grade Level 1

Lesson No. 131

Text Pages After page 60

Lesson Topic: Independent Test 3

Materials needed: Individual copies of test

Purposes: To evaluate addition and subtraction through five.

Procedures:

I. Distribute test copies to all pupils.

II. Instruct pupils to work independently as directed. Teacher reads the directions to the class.

III. Check all papers.

Suggestions for the teacher:
Plan for reteaching if necessary. Test will indicate weaknesses, if any.

Independent Test 3

Name______________________________

For pages [redacted] of Sets • Numbers • Numerals 1.

Add or subtract.

$\begin{array}{r} 3 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +0 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ +2 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ -1 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -2 \\ \hline \end{array}$
$\begin{array}{r} 1 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 0 \\ +5 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ -4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -1 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -1 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -5 \\ \hline \end{array}$

In each list all but one of the numerals name the same number. Draw a ring around the simplest numeral for the number. Cross out the numeral which names a different number.

Zero	One	Two	Three	Four	Five
4 − 4	1	2 + 0	2 + 1	4	2 + 3
0	0 + 1	3 − 1	5 − 3	1 + 3	1 + 4
3 − 3	3 − 2	4 − 3	3	3 + 1	0 + 5
1 − 1	4 − 1	2	3 − 0	5 − 1	5 − 1
2 − 1	5 − 4	1 + 1	4 − 1	4 − 4	5

Solve Each equation.

2 + 3 = ☐
☐ = 5 − 3
☐ + 2 = 4

5 − 2 = ☐
☐ = 1 + 3
☐ − 1 = 2

4 + 1 = ☐
☐ = 5 − 4
☐ + 3 = 5

Grade Level 1

Lesson No. 132

Text Pages 61

Lesson Topic: Sums of Six

Materials needed: Six objects for set demonstration

Number strips

Purposes: To help pupils discover and understand the addition combinations of six

Procedures:

I. Prebook Activities
   A. Display a set of five and a set of one.
   B. Have pupils tell the number of each set.
   C. Join the set of one to the set of five and have pupils tell the number of the set.
   D. Follow the procedure listed in teachers' manual.

II. Using the Page
   A. Read the directions aloud.
   B. Have each pupil manipulate objects to stimulate the set joinings depicted in the first two panels.
   C. Have pupils use their number strips.
   D. Give individual help where needed.

Suggestions for the teacher:

Enrichment Activities:

Use the addition numeral cards for oral practice. Hold up a card and have pupils say which number is named.

Grade Level 1

Lesson No. 133

Text Pages 62

Lesson Topic: Subtraction Combinations of Six

Materials needed: Number strips

Purposes: To strengthen the pupils' concept of the relationship of addition to subtraction, particularly with the subtraction combinations of six.

Procedures:

I. Prebook Activities
Have the pupils follow this activity very closely using the number strips.

II. Using the Page
Read the directions for all the sections of the page and have the pupils work independently.

Suggestions for the teacher:

Note: Enrichment Activities on page 62 of Teachers' Edition.

Grade Level 1

Lesson No. 134

Text Pages 63

Lesson Topic: Solving Equations

Materials needed: Six circular flannel board cutouts

Purposes: To provide pupils an opportunity to develop skill in finding sums and differences using the addition and subtraction combination of six.

Procedures:

I. Prebook Activities
   Follow the prebook activities very closely. Make use of flannel board or chalkboard for display.

II. Using the Page
   Read the directions aloud. Check the page.

Suggestions for the teacher:
Note: Mathematical Background and Postbook Activities on page 63 in Teachers' Edition

Grade Level 1

Lesson No. 135

Text Pages 64

Lesson Topic: Solving Equations

Materials needed: Number strips and number line strip
Unlabeled number strips for 4

Purposes: To help pupils maintain and increase their proficiency with the addition and subtraction combinations of six or less

Procedures:

I. Prebook Activities
Use tagboard to make unlabeled number strips. Follow the directions as listed.

II. Using the Page
Read aloud the directions for the first panel. Have pupils work the page. Check the page.

Suggestions for the teacher:
Note: Mathematical Background on page 64 in Teachers' Edition

Grade Level 1

Lesson No. 136

Text Pages 65

Lesson Topic: Sums of Seven

Materials needed: Seven objects for set demonstrations

Purposes: To help pupils discover and understand the addition combinations of seven

Procedures:

I. Prebook Activities
   - A. Display a set of six and a set of one. Have pupils tell the number of each set.
   - B. Continue with the given procedures

II. Using the Page
   - A. Read the Directions aloud
   - B. Have each pupil manipulate sets of objects to solve the first equations as group activity.

Suggestions for the teacher:

Note: Enrichment Activities on page 65 in Teachers' Edition.

Grade Level 1

Lesson No. 137

Text Pages 66

Lesson Topic: Subtraction Combinations of Seven

Materials needed: Seven objects for set demonstrations, number strips

Purposes: To help pupils discover and understand the subtraction combinations of seven and their relationship to the addition combinations of seven

Procedures:

I. Prebook Activities
   A. Conduct a brief review, oral or with flash cards, of the addition combinations of seven.
   B. Make display of seven objects and have the pupils tell the number of the set.

II. Using the Page
   A. Read the instructions for both sections aloud emphasizing that the result of a subtraction is called the difference.
   B. Check the page.

Suggestions for the teacher:

Note: Mathematical Background on page 66 in Teachers' Edition.

Grade Level 1

Lesson No. 138

Text Pages 67

Lesson Topic: Solving Equations

Materials needed: Seven objects for manipulation

Purposes: To provide pupils an opportunity to relate the finding of sums and differences to read situations in their environment

Procedures:

I. Prebook Activities
   A. Conduct a brief oral review of all addition and subtraction combinations through seven.
   B. Use concrete aids where needed.

II. Using the page
   A. Let the pupils work independently on this page after the directions are read aloud.
   B. Check the page.

Suggestions for the teacher:
Note: Postbook Activities on page 67 in Teachers' Edition

Grade Level 1

Lesson No. 139

Text Pages 68

Lesson Topic: Addition and Subtraction Practice

Materials needed: Number strips and the number line strip, seven objects for set demonstrations

Purposes: To strengthen pupils' skill in working with the basic addition and subtraction combinations through seven

Procedures:

I. Prebook Activities
Follow this activity very closely.

II. Using the Page
Read the directions aloud for each of the three panels on page 68. Do the first exercise in each panel as a class activity.

Suggestions for the teacher:

Note: Postbook Activities in Teachers' Edition on page 68.

Grade Level 1

Lesson No. 140

Text Pages After page 68

Lesson Topic: Review 14

Materials needed: Copies of review

Purposes: To review and evaluate addition and subtraction through seven

Procedures:

I. Pass out copies.

II. Read and have pupils follow directions.

III. Pass in and check all papers for evaluation.

Suggestions for the teacher:
Evaluation will indicate weaknesses and needed instruction.

Review 14

Name ____________________

e after page 68 of Sets • Numbers • Numerals 1.

Write the simplest numeral in each ☐.

4 + 3 = ☐	☐ + 3 = 7
6 − 5 = ☐	4 + ☐ = 6
3 + 3 = ☐	☐ − 6 = 0
7 − 2 = ☐	7 − ☐ = 2
1 + 6 = ☐	☐ + 1 = 7

Add or subtract.

4 + 3	3 + 2	2 + 5	0 + 6	6 + 1
7 − 3	5 − 2	7 − 5	6 − 6	7 − 1
7 − 4	5 − 3	7 − 2	6 − 0	7 − 6

Grade Level 1

Lesson No. 141

Text Pages 69

Lesson Topic: Sums of Eight

Materials needed: Eight objects for set demonstration, number strips

Purposes: To help pupils discover and understand the addition combinations of eight

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the page
Read the directions aloud. Relate previous activity.

III. Check the page.

Suggestions for the teacher:
Note: Postbook activities and Mathematical Background in Teachers' Edition on page 69.

Grade Level 1

Lesson No. 142

Text Pages 70

Lesson Topic: Subtraction Combination of Eight

Materials needed: Number strips

Purposes: To help pupils discover and understand the subtraction combinations of eight and their relationship to the addition combinations of eight

Procedures:

I. Prebook Activities
Have pupils use their number strips and review the addition combination of eight, by constructing the "number square" as shown on the pupils' page.

II. Using the Page
Read aloud the directions for the independent practice.

III. Check the page.

Suggestions for the teacher:

Note: Enrichment Activities on page 70 in Teachers' Edition.

Grade Level 1

Lesson No. 143

Text Pages 71

Lesson Topic: Writing Equations

Materials needed: None

Purposes: To reinforce the pupils' concept of different numerals for the same number

Procedures:

I. Prebook Activities
Follow the prebook activities very closely. Use all examples given.

II. Using the page
Read the directions for the page and do the first two as a group activity, having the pupils trace over the dashed numerals.

III. Check the page.

Suggestions for the teacher:

Enrichment Activities: Have the pupils do Activity 3, page V. in Teachers' Edition.

Grade Level 1

Lesson No. 144

Text Pages 72

Lesson Topic: Addition and Subtraction

Materials needed: Eight objects for set demonstrations, number strips

Purposes: To strengthen the pupils' skill in working with addition and subtraction combinations through eight

Procedures:

I. Prebook Activities
   - A. Write the equation 4 + 3 = [] on the board.
   - B. Have one pupil show how to solve this equation by using sets.
   - C. Have another pupil show how to solve this equation by using number strips.
   - D. Repeat this procedure several times to give each person a chance to participate.

II. Using the page
   - A. Read the directions aloud.
   - B. Check pupils' work to see if they are having trouble.
   - C. Encourage pupils to complete the page independently.

Suggestions for the teacher:

Enrichment Activities:

Have a pupil make up a verbalized problem and have another solve it. Example: I subtracted 4 from a number and the answer was 2. What is the number from which I subtracted 4?

Give several equations like the one above.

Grade Level 1

Lesson No. 145

Text Pages 73

Lesson Topic: Sums of Nine

Materials needed: Nine objects for set demonstrations, number strip

Purposes: To help pupils discover and understand the addition combinations of nine

Procedures:

I. Prebook Activities
   A. Call eight pupils and have them stand together.
   B. Ask: How many pupils are standing?
   C. Have a pupil write eight on the board.
   D. Repeat this procedure several times.
   E. Practice giving children equations at their seats using 8, 1, and 9.

II. Using the Page
   A. Do a demonstration on the board of the first four equations as a group discussion.
   B. Encourage the pupils to do the rest of the page independently.
   C. Check pupils' books.

Suggestions for the teacher:

Enrichment Activities:

Have the pupils do Activity 4, page V.

Note: Mathematical Background.

Grade Level 1

Lesson No. 146

Text Pages 74

Lesson Topic: Subtraction Combinations of Nine

Materials needed: Number strips

Purposes: To help pupils discover and understand the subtraction combinations of nine and their relationship to the addition combinations of nine

Procedures:

I. Prebook Activities
   A. Have pupils select all number strips except the two marked "9" and the number line strips 1-10.
   B. Have them assemble the strips. As each row is assembled, call out the corresponding combination 1 + 8, 2 + 7 and so on until 8 + 1 has been reached.

II. Using the Page
   A. Read aloud the directions.
   B. Follow the procedure listed in Teacher's Edition page 74.
   C. Encourage group participation.
   D. Check pupils' work very closely.

Suggestions for the teacher:

Enrichment Activities:

Have pupils make up verbals for each of the equations below.

$2 + 5 = 7$ or $8 - 6 = 2$

2 0 5 = 7 or 8 0 6 = 2

Use any equation up to the numeral nine.

Grade Level 1

Lesson No. 147

Text Pages 75

Lesson Topic: Solving Equations

Materials needed:

Purposes: To provide pupils an opportunity to relate the finding of sums and differences to problem situations in their environment

Procedures:

I. Prebook Activities
    A. Conduct a brief oral review of all addition and subtraction combination through nine.

II. Using the Page
    A. Read the directions aloud and clearly.
    B. Do the first exercise in each section as a group activity.
    C. Let the pupils finish the page independently.

Suggestions for the teacher:

Enrichment Activities:
Follow enrichment activities suggested in Teacher's Edition page 75.

Grade Level 1

Lesson No. 148

Text Pages 76

Lesson Topic: Addition - Subtraction Table

Materials needed:

Purposes: To give pupils a compact summary of the addition combinations through nine by tabulating sums in addition-subtraction table

Procedures:

I. Prebook Activities
   A. Draw an addition table on the board, or use one you may already have available.
   B. Emphasize the plus sign.
   C. Point out that the numerals in the left column will name the first number and the numerals across the top will name the second number.

II. Using the Page
   A. Read the directions aloud.
   B. Have pupils work independently.
   C. Check each pupil's book.
   D. Give special help where needed.

Suggestions for the teacher:

Enrichment Activities:

Let pupils solve equations without any aid such as:

3 + 3 = []	8 - 2 = []	4 + 5 = []
8 - 4 = []	2 + 6 = []	9 - 7 = []

Grade Level 1

Lesson No. 149

Text Pages 76

Lesson Topic: Review 16

Materials needed: Copies of review

Purposes: To review addition and subtraction combinations through nine

Procedures:

I. Distribute copies of the review to each pupil.

II. Have pupils follow the oral directions.

III. Check all papers and evaluate the findings.

Suggestions for the teacher:

Reteach if necessary as indicated by the review.

Review 16

Name______________________________

Use after page 76 of Sets • Numbers • Numerals 1.

Write the simplest numeral in each $\square$.

$5 + 3 = \square$

$9 - 2 = \square$

$4 + 4 = \square$

$9 - 5 = \square$

$6 + 1 = \square$

$8 - \square = 3$

$\square + 7 = 9$

$\square - 4 = 4$

$5 + \square = 9$

$\square - 8 = 0$

Add or subtract.

$$\begin{array}{r} 4 \\ +3 \\ \hline \end{array} \qquad \begin{array}{r} 5 \\ +3 \\ \hline \end{array} \qquad \begin{array}{r} 2 \\ +6 \\ \hline \end{array} \qquad \begin{array}{r} 3 \\ +6 \\ \hline \end{array} \qquad \begin{array}{r} 9 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ -3 \\ \hline \end{array} \qquad \begin{array}{r} 8 \\ -5 \\ \hline \end{array} \qquad \begin{array}{r} 8 \\ -6 \\ \hline \end{array} \qquad \begin{array}{r} 9 \\ -6 \\ \hline \end{array} \qquad \begin{array}{r} 9 \\ -0 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ 3 \\ +4 \\ \hline \end{array} \qquad \begin{array}{r} 5 \\ 1 \\ +2 \\ \hline \end{array} \qquad \begin{array}{r} 7 \\ 0 \\ +1 \\ \hline \end{array} \qquad \begin{array}{r} 3 \\ 1 \\ +5 \\ \hline \end{array} \qquad \begin{array}{r} 2 \\ 5 \\ +2 \\ \hline \end{array}$$

Grade Level 1

Lesson No. 150

Text Pages 77

Lesson Topic: Addition and Subtraction Practice

Materials needed: Number strips and number line strip

Purposes: To strengthen pupils' skill in working with the basic addition and subtraction combinations through nine

Procedures:

I. Prebook Activities
   - A. Have pupils use their number line strips and number squares for the numbers eight and nine.
   - B. Write the words six, seven, eight and nine on the board.
   - C. Have each pupil write on their paper an addition numeral or a subtraction numeral beneath the appropriate number word.

II. Teaching the Page
   - A. Read aloud the directions for the top and center panel.
   - B. Have pupils complete these panels on their own.
   - C. Check pupils' work very closely.
   - D. Give individual help where needed.

Suggestions for the teacher:
Enrichment Activities:
Follow Postbook Activities listed in Teacher's Edition page 77.

Grade Level 1

Lesson No. 151

Text Pages 78

Lesson Topic: Check up Time .

Materials needed:

Purposes: To provide pupils an opportunity to review the concepts of this unit and evaluate their understanding of these concepts

Procedures:

I. Teaching the Lesson
   - A. Read aloud the directions for the first set of exercises.
   - B. Caution the pupils to observe the + and - sign.
   - C. Do the first exercise as a group activity.
   - D. Allow time for pupils to finish the first set of exercises.
   - E. Encourage the pupils to work independently.
   - F. Check pupils' work closely.

Suggestions for the teacher:

Enrichment Activities:

Administer the independent test which covers 61-78.

Grade Level 1

Lesson No. 152

Text Pages After page 78 of SNNI

Lesson Topic: Independent Test 4

Materials needed: Copies of test

Purposes: To evaluate addition and subtraction through nine

Procedures:

I. Provide each pupil with a copy of the test.
II. Work independently as directed orally by the teacher.
III. Collect papers. Check and diagnose weaknesses.

Suggestions for the teacher:
Evaluation will determine need for reteaching, if any.

Independent Test 4

For pages 59-78 of Sets • Numbers • Numerals 1.

Name ____________________

Solve each equation.

$3 + 5 = \square$

$4 + 1 = \square$

$6 + 3 = \square$

$2 + 4 = \square$

$0 + 5 = \square$

$1 + 6 = \square$

$3 + 1 = \square$

$4 + 4 = \square$

$(1 - 1) + 6 = \square$

$5 + (2 - 1) = \square$

$9 - (2 + 3) = \square$

$(4 + 1) - 3 = \square$

$7 - 4 = \square$

$4 - 1 = \square$

$8 - 2 = \square$

$9 - 5 = \square$

$5 - 5 = \square$

$6 - 5 = \square$

$3 - 2 = \square$

$7 - 0 = \square$

$(2 + 1) + 1 = \square$

$3 + (2 + 3) = \square$

$4 + (2 - 2) = \square$

$(5 + 1) + 2 = \square$

Add or subtract.

$\begin{array}{r} 3 \\ +4 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ -4 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -1 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ +2 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$

$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +3 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ -3 \\ \hline \end{array}$ $\begin{array}{r} 1 \\ +3 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +0 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ -6 \\ \hline \end{array}$

$\begin{array}{r} 4 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ -1 \\ \hline \end{array}$ $\begin{array}{r} 2 \\ +6 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ -6 \\ \hline \end{array}$ $\begin{array}{r} 2 \\ +2 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ -2 \\ \hline \end{array}$

$\begin{array}{r} 1 \\ 2 \\ +3 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ 1 \\ +4 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ 1 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ 1 \\ +2 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ 0 \\ +3 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ 2 \\ +3 \\ \hline \end{array}$

Grade Level 1

Lesson No. 153

Text Pages 79

Lesson Topic: Fractional Number One-Half and Fraction 1/2

Materials needed: Square shaped sheets of paper (one for each pupil), circular pieces of paper, pieces of yarn 2' long

Purposes: To help pupils develop the concept of the fractional number one-half and the fraction 1/2

Procedures:

I. Prebook Activities
   - A. Ask, how do you find one half of an apple? Candy bar and etc.
   - B. Follow the procedures listed under Prebook Activities very closely.

II. Using the Page
   - A. Ask questions about the pictures in the first panel to emphasize the fraction 1/2.
   - B. Read aloud the directions and discuss the purpose of the dashed lines in the first three exercises.
   - C. Have pupils complete the page by themselves.

Suggestions for the teacher:

Enrichment Activities:

Have the pupils label each part of the pictures in the last three panels with the fraction 1/2. Note Mathematical Background.

Numerous concrete objects which illustrate halves, thirds, and fourths should be readily available for children to handle individually for this lesson.

Grade Level 1

Lesson No. 154

Text Pages 80

Lesson Topic: Fractional Number One-Third and Fraction 1/3

Materials needed: Rectangular cutout, rectangular pieces of paper

Purposes: To help pupils develop the concept of the fractional number one-third and the fraction 1/3

Procedures:

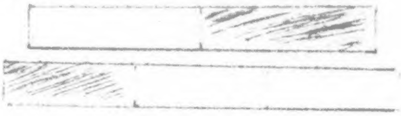
I. Prebook Activities
   A. Review the fractional number one-half and the numeral 1/2.
   B. Follow closely the procedures that are listed in Teacher's Edition under Prebook Activities.

II. Using the page
   A. Direct attention to the top panel.
   B. Point out that the colors help us see how the shapes have been separated.
   C. Write the fraction 1/3 on the board and ask the children to tell what they think it means.
   D. Read the directions aloud for the rest of the panels and let children complete the page on their own.

Suggestions for the teacher:

Enrichment Activities:

Prepare two geometric figures of the same size and shape and color, 1/2 of one figure and 1/3 of the other as indicated below.



Grade Level 1

Lesson No. 155

Text Pages 81

Lesson Topic: Fractional Numbers

Materials needed: 6 square flannel board cutouts, same size, 3 blue, 3 another color

Purposes: To provide practice for pupils in using the fractions 1/2 and 1/3

Procedures:

I. Follow Prebook Activities closely, using chalkboard and flannel squares.

II. Have pupils rearrange squares in rectangular shape in different ways stressing the fact that 1/2 of them will always be blue squares.

III. Read aloud the directions for the page. Then have pupils complete the page independently.

Suggestions for the teacher:

Pupils who encounter difficulty with the last panel of exercises should arrange the 6 flannel board cutouts as indicated in each exercise before marking the fraction that names the colored part.

Grade Level 1

Lesson No. 156

Text Pages After page 81

Lesson Topic: Review 7

Materials needed: Copies of the review sheet for each pupil

Purposes: To review fractional numbers and fractions 1/2, 1/3, and 1/4

Procedures:

I. Provide each pupil with a copy.

II. Read aloud the instructions.

III. Collect and check all papers.

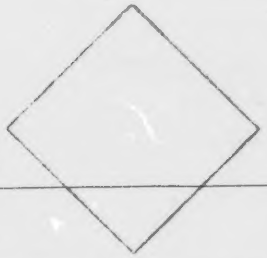
IV. Analyze results to diagnose strengths and weaknesses.

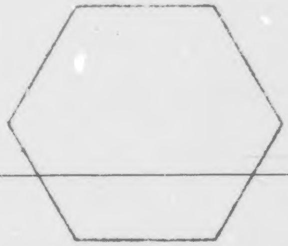
Suggestions for the teacher:
Reteaching should follow if review indicates the need.

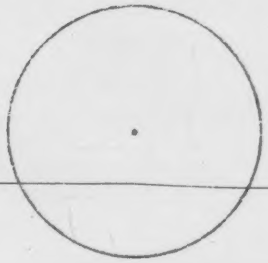
Review 7 **Name** ____________________

Use after page 40 of Sets • Numbers • Numerals 1.

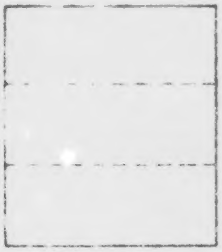
Color $\frac{1}{2}$ of each picture.

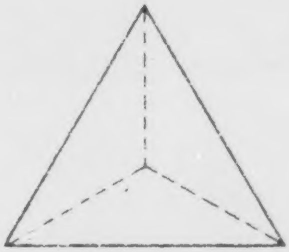


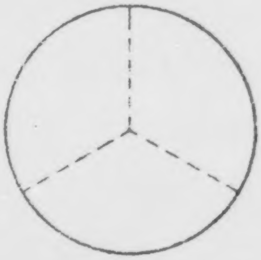




Color $\frac{1}{3}$ of each picture.







Draw 4 squares (☐). Draw a ring around $\frac{1}{2}$ of them.

Draw 6 triangles (△). Draw a ring around $\frac{1}{3}$ of them.

Grade Level 1

Lesson No. 157

Text Pages 82

Lesson Topic: Fractional Number one-Fourth and Fraction 1/4

Materials needed: Rectangular pieces of paper

Purposes: To help develop the fractional number concept one-fourth and the fraction 1/4

Procedures:

I. Follow Prebook Activities, p. 42, closely. If the response "one-fourth" is note forthcoming, explain why one part is called 1/4 of the piece of paper.

II. Use suggestions for Using the Page. Pupils who have difficulty should actually separate objects into fourths.

III. For the figures separated have pupils write 1/4 on each of the parts, also 1/2 and 1/3 on parts of those figures separated.

Suggestions for the teacher:
Prepare three geometric figures of the same size and shape, and color 1/2 of one figure, 1/3 of another, and 1/4 of the other. Use these figures to help pupils discover that $1/4 < 1/3 < 1/2$.

Grade Level 1

Lesson No. 158

Text Pages 83

Lesson Topic: Practice with Fractions

Materials needed: 2 square cut-outs, one blue and the other a different color

Purposes: To strengthen pupils' concept of the fractional numbers 1/2, 1/3, and 1/4

Procedures:

I. Follow Prebook Activities to demonstrate and explain 1/2 with the cutouts.

II. Read aloud the directions for the lesson and emphasize they are to color 1/2 of the objects in each drawing in the first panel.

III. Have them do the page as an independent activity. Those who have difficulty may actually separate figures (pieces of paper) into halves, thirds, or fourths.

Suggestions for the teacher:
Have pupils label each part in each exercise with appropriate fraction.

Grade Level 1

Lesson No. 159

Text Pages 84

Lesson Topic: Practice with Fractions

Materials needed: Chairs

Purposes: To extend the pupils' concept of fractional numbers 1/2, 1/3 and 1/4

Procedures:

I. Use Prebook Activities, p. 84 to demonstrate with pupils and chairs that 1/2 of 4 is 2, 1/3 of 6 is 2, and 1/4 of 8 is 2.

II. Read aloud the directions page 84 and discuss the number of squares that should be colored in each section of the first panel.

III. Complete the page independently.

Suggestions for the teacher:

1. Pupils having trouble may construct and separate similar figures.
2. Prepare sheets and direct children to draw a ring around the number of objects indicated by the fraction.

Grade Level 1

Lesson No. 160

Text Pages 85

Lesson Topic: Checkup Time

Materials needed: None

Purposes: To review and evaluate understanding of concepts of the unit

Procedures:
Read aloud the directions at the top of the page. Then have pupils do the page as an independent activity.

Suggestions for the teacher:
Check the answers, analyze the pupils' performance, and do any necessary review and reteaching before administering the independent test p. 85.

Grade Level 1

Lesson No. 161

Text Pages After page 85

Lesson Topic: Review 8 (optional)

Materials needed: Duplicated copies of the review for all pupils

Purposes: To review fractions 1/2, 1/3, and 1/4

Procedures:

I. Distribute copies to all pupils.

II. Have pupils work independently as directed.

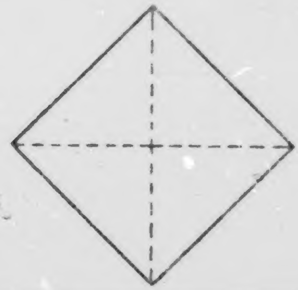
III. Check and use results for diagnosis of individual needs.

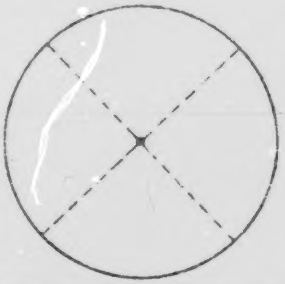
Suggestions for the teacher:

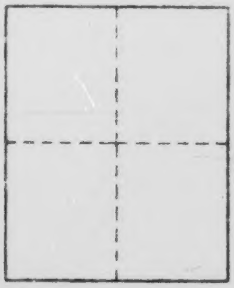
Review 8 85 **Name**______________________________

Use after page ~~[illegible]~~ of Sets • Numbers • Numerals 1.

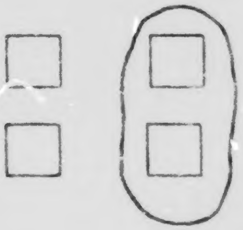
Color $\frac{1}{4}$ of each picture.



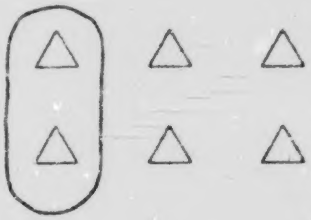




A ring is drawn around some of the objects in each set. Write the fraction for those objects inside the ring.



$\frac{1}{2}$



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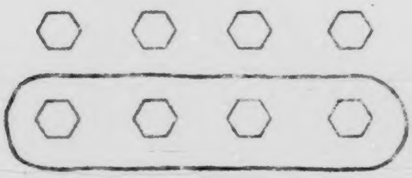

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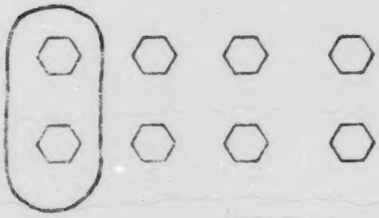

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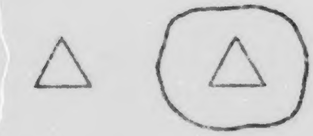

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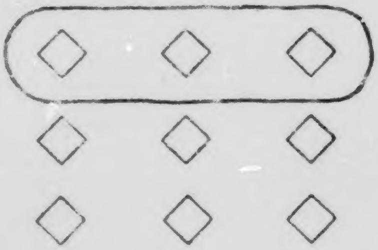

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Grade Level 1

Lesson No. 162

Text Pages 86

Lesson Topic: Money - Pennies and Nickels

Materials needed: Real or toy coins, nickels and pennies

Purposes: To help pupils determine money value of collections of nickels and pennies

Procedures:

I. Use coins to demonstrate Prebook Activities, p. 86.

II. Ask the questions about money value, page 86, of pennies and nickels.

III. Discuss the first panel with class, introduce symbol ¢ as abbreviation.

IV. Read directions and have class work independently.

Suggestions for the teacher:

Pupils who have difficulty should use real or toy money to dramatize the pictures, replace each nickel with five pennies and then count the pennies.
Postbook activities, p. 86 are suggested to strengthen and enlarge concept of money value.

Grade Level 1

Lesson No. 163

Text Pages 87

Lesson Topic: Money - Penny and Nickel

Materials needed: Real or toy coins, nickels and pennies

Objects worth 1¢ through 9¢

Purposes: To discover price tags as recorded measurements of money

Procedures:

I. Follow Prebook Activities page 87 to select different coins that will pay for articles priced.

II. Read directions aloud, having children read the first price tag, 2¢.

III. Then pupils are to find picture and set of coins denoting the value and draw matching lines. Pupils should complete the page independently.

IV. When difficulty arises dramatize the pictures with real coins.

Suggestions for the teacher:
Enrichment activities, page 87.

Grade Level 1

Lesson No. 164

Text Pages After page 87

Lesson Topic: Review 20

Materials needed: Copies of the review

Purposes: To review and diagnose the teaching, understanding of money - penny and nickel

Procedures:

I. Distribute copies of the review to each pupil.

II. Work independently as directed.

III. Evaluate results.

Suggestions for the teacher:

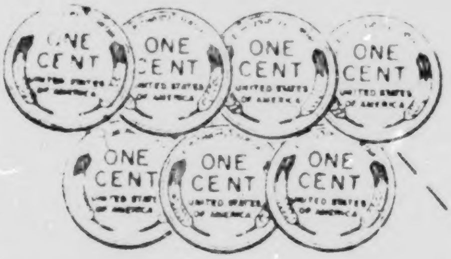
Reteaching should be planned according to diagnosis.

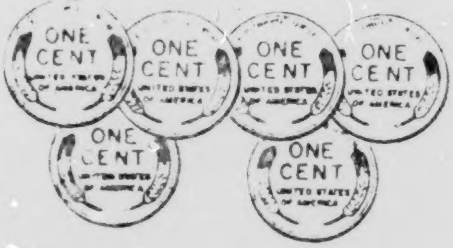
Review 20

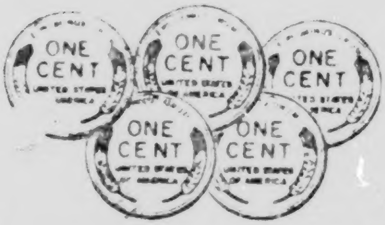
Name ______________________

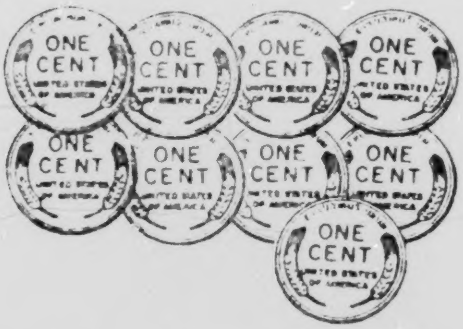
Use after page 87 of Sets • Numbers • Numerals 1.

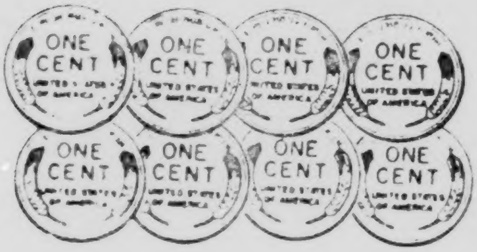
Match the sets that have the same value.

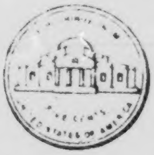


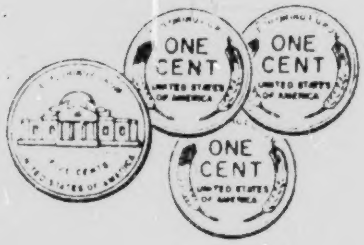


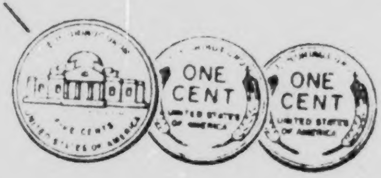


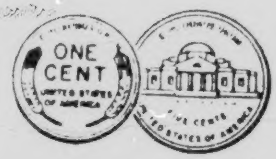


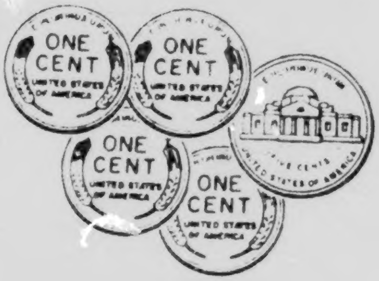












Grade Level 1

Lesson No. 165

Text Pages 88

Lesson Topic: Liquid Measure

Materials needed: 1 quart container, 2 pt. containers, and 4 measuring cups

Purposes: To develop an understanding of quart, pint and cup as units of liquid measure

Procedures:

I. Prebook activities page 88; suggest teaching and demonstration procedures to show relationship between pints and quarts, quarts and cups, pints and cups.

II. Study panel 1, page 88. Discuss and complete second panel together. Read aloud directions and have pupils work independently. Emphasize that each exercise uses two names for the same measurement.

III. Pupils who have difficulty should use containers to dramatize the picture.

Suggestions for the teacher:
Postbook activity page 88

Grade Level 1

Lesson No. 166

Text Pages After page 88

Lesson Topic: Review 19

Materials needed: Copies of the review

Purposes: To review and evaluate learning of liquid measure

Procedures:

I. Distribute copies of the review.

II. Work independently.

III. Collect papers.

Suggestions for the teacher:
Check all papers and plan reteaching activities according to the evaluation.

Review 19 Name

use after page 89 of Sets • Numbers • Numerals

Write the correct numeral in each blank.

1 quart measures the same as ___ pints.

1 quart measures the same as ___ cups.

4 cups measure the same as ___ pints.

6 pints measure the same as ___ quarts.

Match the amounts that are the same.

1 cup
1 cup
1 cup
1 cup
1 cup
MILK
1 quart
1 cup
MILK
1 quart
MILK
1 quart
1 pint
1 cup
1 pint
1 pint
1 pint
1 pint
1 pint
1 pint
1 pint
1 cup

Grade Level 1

Lesson No. 167

Text Pages 89

Lesson Topic: Points and Line Segments

Materials needed: Taut string or band, or straight stick, edge of paper

Purposes: To understand the concept of point and line segment

Procedures:

I. Follow Prebook Activities to mark and name points, using terminology Point A, etc. end points, and line segment.

II. Use suggested models of line segments.

III. Have pupils mark points and label them according to your directions and then use a straight edge to draw line segments.

IV. Discuss and relate first panel to their drawing. Do the next panel together, and have them do last panel independently as suggested. Give individual help as needed.

Suggestions for the teacher:
Postbook Activities

Grade Level 1

Lesson No. 168

Text Pages 90

Lesson Topic: Linear Measure - Inch

Materials needed: Ruler for each pupil, several books same size, flat sticks same length

Purposes: To make and record linear measurements

Procedures:

I. Follow Prebook Activities using books and sticks first, expressing answers as "books long", "sticks long".

II. Relate the idea into "inches" using a ruler.

III. In the first panel show how to use a ruler for measuring length, having pupils trace over the dotted 3 and 5 after they understand that these name measures.

IV. After reading directions, children complete the page independently.

Suggestions for the teacher:

Postbook activities, page 90 suggest measuring activities.

Grade Level 1

Lesson No. 169

Text Pages 91

Lesson Topic: Rectangle

Materials needed: Rectangular shaped cutouts and a large, irregularly shaped paper

Purposes: To help discover meaning of rectangle or a simple closed 4 sided figure, opposite sides alike

Procedures:

I. Prebook Activities demonstrate and explain a rectangle as closed figure with 4 sides and four right angles. Follow as directed.

II. Read directions aloud and help pupils work with a ruler the line segments directed. Supervise second line of directions and urge them to work on their own in the lower panel.

III. Give individual help to those pupils who are having difficulty.

Suggestions for the teacher:
Postbook Activities

Grade Level 1

Lesson No. 170

Text Pages 92

Lesson Topic: Square

Materials needed: Cutouts of square shapes (different sizes)
Paper model of right angle

Purposes: To help pupils discover that all four sides of a square have the same length

Procedures:

I. Teaching the Lesson

- A. Prebook Activities.
  Review the meaning of square figures and shapes. Use the paper model to show that all 4 angles of a square are right angles.
- B. Using the Page
  Read aloud the directions. Allow sufficient time for the drawing of the 4 line segments. Check the page.

Suggestions for the teacher:
Enrichment Activities. See page 92 in Teacher's Edition.

Grade Level 1

Lesson No. 171

Text Pages After page 92

Lesson Topic: Review 17

Materials needed: Copies of the review for each pupil

Purposes: To review measurement and geometric shapes

Procedures:

I. Pass each pupil a copy of the review.

II. Follow the directions given orally by the teacher.

III. Check and diagnose to discover each pupil's weaknesses.

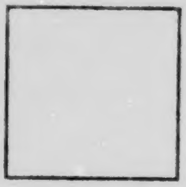
Suggestions for the teacher:

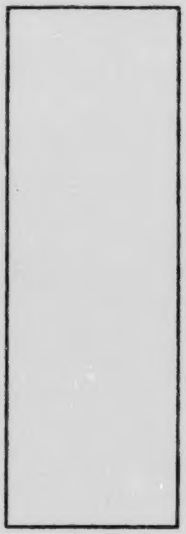
Review 17 92

Use after page [illegible] of Sets • Numbers • Numerals 1
Revised

Name ____________________

Record the inch measure of the sides of each figure.
Write the letter R in each rectangle.
Write the letter S in each square.


___inches
___inches
___inches
___inches


___inches
___inches
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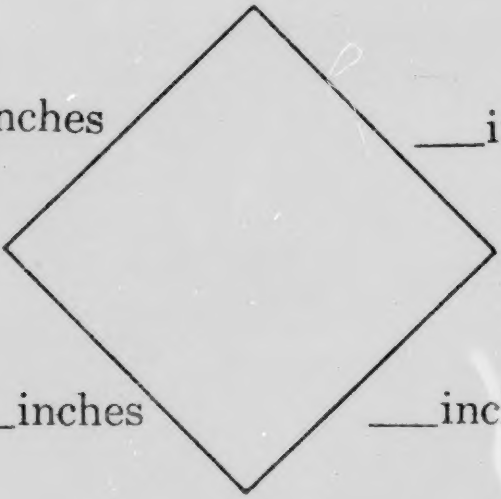
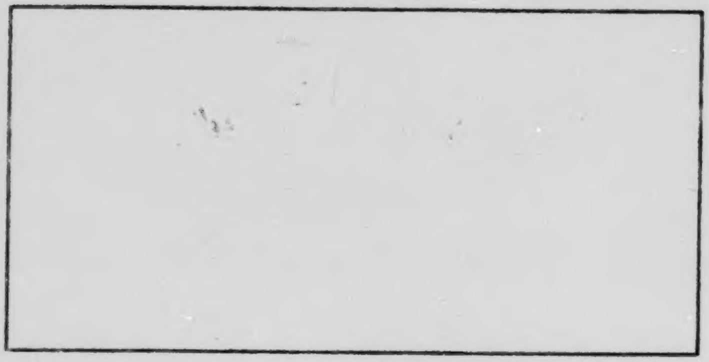
___inches


___inches
___inches
___inches
___inches


___inches
___inches
___inches
___inches

Grade Level 1

Lesson No. 172

Text Pages 93

Lesson Topic: Sets of Points - Circle

Materials needed: String or cord

Two pieces of chalk or two pegs

Purposes: To help pupils refine their understanding of a circle

Procedures:

I. Prebook Activities

Follow the prebook activities very closely.

II. Using the Page

Discuss the panels. Read the directions. Pupils should do the last panel independently.

Suggestions for the teacher:

Note: Postbook activities and Mathematical Background on page 93 in Teacher's Edition.

Grade Level 1

Lesson No. 173

Text Pages 94

Lesson Topic: Geometric Figures

Materials needed: Rectangular cutouts, square cutouts

Purposes: To help pupils recognize and name certain geometric figures and shapes

Procedures:

I. Prebook Activities
Place a rectangular cutout on the flannel board. Ask the questions given. Then follow the same procedure with the square cutouts.

II. Using the Page
Direct attention to the first panel and read aloud only the first sentence of the directions.

Suggestions for the teacher:
Postbook Activities and Enrichment Activities

Grade Level 1

Lesson No. 174

Text Pages After page 94

Lesson Topic: Review 18

Materials needed: Copies of the review for each pupil

Purposes: To review geometric shapes and discovering patterns

Procedures:

1. Distribute copies of the review.
2. Work independently.
3. Check papers and evaluate findings.

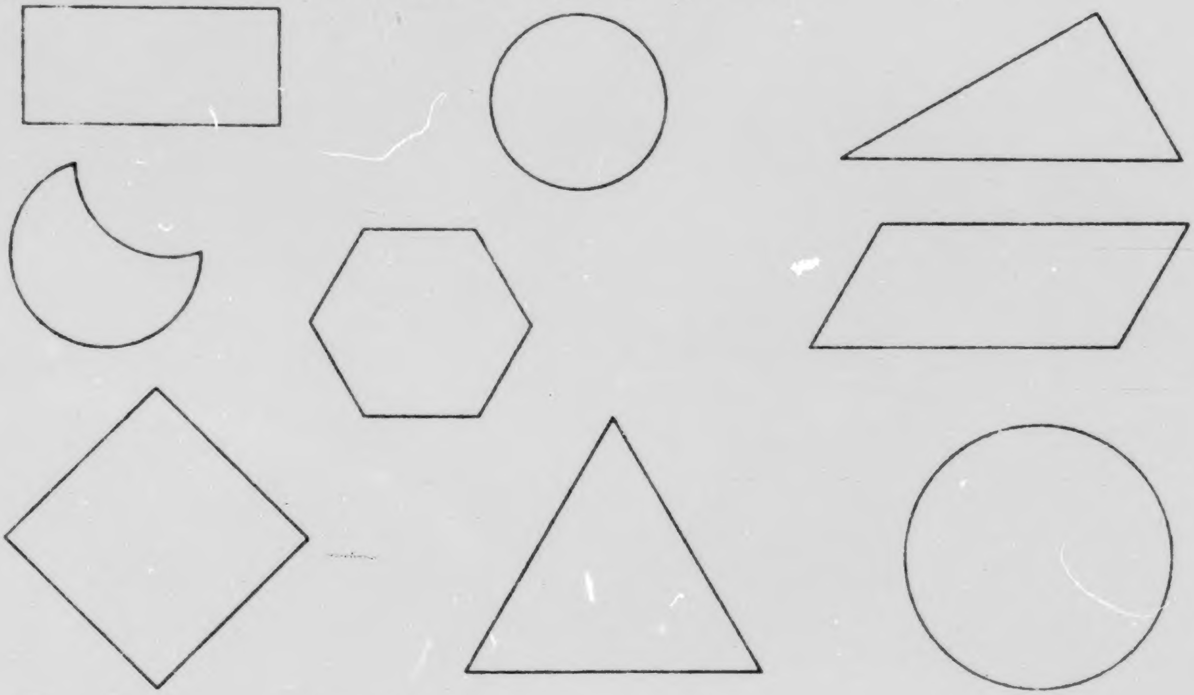
Suggestions for the teacher:

Reteaching is to be done as is indicated by the results.

Review 18 **Name**____________________________

Use after page 94 of Sets • Numbers • Numerals 1.
Revised Edition

Color the inside of each rectangle blue.
Color the inside of each triangle red.
Color the inside of each circle green.



Continue each pattern.

▽ ○ ▽ ○ ▽ ___ ___ ___

□ ◇ ○ □ ◇ ○ ___ ___ ___

△ △ ○ ○ △ △ ○ ___ ___ ___

1, 2, 3, 1, 2, 3, ___, ___, ___

Grade Level 1

Lesson No. 175

Text Pages 95

Lesson Topic: Checkup Time

Materials needed: Rulers, graduated in inches only

Purposes: To provide pupils an opportunity to review the concepts of this unit and to evaluate their understanding of these concepts

Procedures:

I. Using the page
Read aloud the directions for the first panel and let the pupils proceed on their own. After they have completed the first panel, read aloud the directions for the center panel.

II. Be sure to read all directions.

Suggestions for the teacher:

Postbook Activities: Check and analyze the pupils' performance on this checkup page. Do any necessary reviewing and reteaching before administering the test.

Grade Level 1

Lesson No. 176

Text Pages 96

Lesson Topic: One-to-One Matching

Materials needed: Counters (beads, pebbles, or bottle caps) at least as many as there are pupils in the room

Purposes: To help pupils form a clear concept of one-to-one matching

Procedures:

I. Prebook Activities
Follow prebook activities very closely, using all suggestions given.

II. Using the page
Have a discussion on the pictures by asking the questions given.

Suggestions for the teacher:
Note Mathematical Background in Teacher's Edition on page 96.
Postbook Activities

Grade Level 1

Lesson No. 177

Text Pages 97

Lesson Topic: The Counting Man

Materials needed: Demonstration counting man, pupils' counting men

Purposes: To introduce the counting man and help pupils associate the numerals 0 and 1 with the numbers zero and one shown by a counting man

Procedures:

I. Prebook activities: Follow the prebook activities very closely.

II. Using the Page: Direct attention to the panels. Read aloud the directions for the last two panels.

III. Follow directions as given.

Suggestions for the teacher:
Note: Postbook Activities on page 97 in Teacher's Edition.

Grade Level 1

Lesson No. 178

Text Pages 98

Lesson Topic: The Counting Man

Materials needed: Demonstration counting man, numeral cards (0-9)

Purposes: To help pupils associate numerals with numbers shown by a counting man.

Procedures:

I. Prebook Activities
Display a demonstration counting man with no fingers attached. Proceed with the question.

II. Using the Page
Read aloud the directions for the page.
Pupils who have difficulty may count the fingers on each counting man.

Suggestions for the teacher:
Note: Postbook Activities on page 98.

Grade Level 1

Lesson No. 179

Text Pages 99

Lesson Topic: The Number Ten

Materials needed: Demonstration counting man

Purposes: To help pupils grasp the cardinal concept of the number ten

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Read aloud the directions. Discuss the story portrayed and have pupils draw one-to-one matching lines between the fingers and the horses that are outside the pen.

Suggestions for the teacher:

Note: Mathematical Background on page 99

Grade Level 1

Lesson No. 180

Text Pages 100

Lesson Topic: The Memory Man

Materials needed: Two demonstration counting men, a set of 13 objects

Purposes: To help pupils understand the concept of place value

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Have pupils trace the dashed matching lines in panel 1, counting aloud as each object is matched with a finger.

III. Continue with the given procedure.

Suggestions for the teacher:
Note: Postbook Activities and Mathematical Background on page 100.

Grade Level 1

Lesson No. 181

Text Pages 101

Lesson Topic: The Numeral Ten

Materials needed: Demonstration counting men

Purposes: To help pupils understand that numeral 10 names the number ten

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Direct attention to the first 2 panels and discuss the meaning of the numeral 10 as meaning 1 ten and 0 ones. Continue with the directions as given.

Suggestions for the teacher:
Note: Postbook activities and Mathematical Background on page 101.

Grade Level 1

Lesson No. 182

Text Pages 102

Lesson Topic: Numerals 11 and 12

Materials needed: Demonstration counting men, 12 objects to count

Purposes: To further strengthen pupils' understanding of place value and to develop understanding of the numbers eleven and twelve

Procedures:

I. Prebook Activities
   - A. Place twelve objects in random arrangement on a table.
   - B. As you pick up the first object, place it on your desk and have a pupil place a finger on the 0 man.
   - C. Follow prebook activities closely concerning the counting men.

II. Using the page
   - A. Read the directions aloud.
   - B. Emphasize that the 10 ones are recorded as 1 ten so the 0 man can record another count.
   - C. Encourage pupils to ask questions about counting men.
   - D. Let pupils complete the last panel on their own.

Suggestions for the teacher:

Enrichment Activities:

Pupils who have difficulty should use the demonstration counting men or real objects before they use the picture.

Grade Level 1

Lesson No. 183

Text Pages 103

Lesson Topic: Numerals 13 and 14

Materials needed: Demonstration counting men, 14 objects to count

Purposes: To further strengthen pupils' understanding of place value and to develop understanding of the numbers thirteen and fourteen

Procedures:

I. Prebook Activities
  A. Review prebook activities page 102.
  B. For the numbers ten through fourteen, copy the following on the board.

___tens and __ones
___tens and __ones
___tens and __ones
___tens and __ones
___tens and __ones

T	O
1	0

II. Using the Page
  A. Read aloud the directions for the page and study the first panel in class.
  B. Repeat the same procedures for the center panel.
  C. Let the pupils work the last panel on their own.

Suggestions for the teacher:
Note: Pupils who have difficulty should use the demonstration counting men to show the numbers 1 - 14.

Grade Level 1

Lesson No. 184

Text Pages 104

Lesson Topic: A Number Line Strip

Materials needed: Number strips, scotch tape

Purposes: To help pupils illustrate addition on a simplified number line

Procedures:

I. Prebook Activities
   A. Have pupils place a 3 strip and a 4 strip below the number line strip (1-10) to illustrate 3 + 4 = 7.
   B. Follow closely the activities listed under prebook activities page 104 in teacher's edition.

II. Using the Page
   A. Direct attention to the first panel and emphasize that the two important things about a number line strip are the numerals and the space between them.
   B. Discuss the second panel. Note that the second arrow terminates directly above the answer numeral.
   C. Do the last one in a similar way.

Suggestions for the teacher:
Pupils who have difficulty may use their extended number line strips on a sheet of paper and draw arrows to solve the equations 1 + 10 = [] and 2 + 10 = []

Grade Level 1

Lesson No. 185

Text Pages 105

Lesson Topic: A Number Line

Materials needed: Extended number line strip, number strips

Purposes: To help pupils illustrate addition on a simplified number line

Procedures:

I. Prebook Activities
   - A. Follow step by step the procedures that are suggested under Prebook Activities page 105 in teacher's edition.

II. Using the Page
   - A. Read the directions aloud and study the first panel as a class activity.
   - B. Be sure that pupils understand that the first arrow beginning at the 0 mark illustrates the number ten.
   - C. Do a demonstration on the board and let the children see how they are to use their number strips.
   - D. Allow time for questions.
   - E. Have pupils complete the rest of the page on their own.

Suggestions for the teacher:
Pupils who have difficulty should use their number line strip and number strips just as they did in the Prebook Activities.
Note: Mathematical Background page 105 in Teacher's Edition.

Grade Level 1

Lesson No. 186

Text Pages 106

Lesson Topic: Number and Numeral

Materials needed: Demonstration counting men, 14 objects (checkers, bottle caps, or crayons) per pupil, 14 flannel board cutouts

Purposes: To help pupils strengthen the place value concept by using numerals 9 through 14

Procedures:

I. Prebook Activities
  A. Place 10 cutouts on the flannel board and have each pupil to place 10 objects on his desk in any random arrangement.
  B. Have a pupil show this number on the counting men.
  C. Continue this activity for sets containing 11, 12, 13 and 14 objects.

II. Using the Page
  A. Read aloud the directions for the page.
  B. Pupils can trace over the dashed numerals as the first panel is discussed. Pupils having trouble should use the counting men and the T and O grid.

Suggestions for the teacher:
Enrichment Activities:
Place the numeral cards (0-14) on the chalkrail and have pupils arrange them in "one more" order and "one less" order.

Grade Level 1

Lesson No. 137

Text Pages 107

Lesson Topic: Numerals 15 and 16

Materials needed: Demonstration counting men, 16 flannel board cutouts

Purposes: To help pupils extend the concept and use of place value numeration to the numbers fifteen and sixteen

Procedures:

I. Prebook Activities
   A. Place 16 cutouts on the flannel board, one at a time.
   B. As each cutout is placed on the flannel board, have a pupil record the number on the counting men.
   C. Continue placing objects on the flannel board, one at a time, to form another set until it contains 6 objects.

II. Using the Page
   A. Read the directions aloud.
   B. Follow closely the directions that are suggested in Teacher's Edition page 107.
   C. Let pupils complete the last panel on their own.

Suggestions for the teacher:

Pupils who have difficulty may use real objects or the counting men before returning to the pictures.

Note: Mathematical Background page 107 in teacher's edition.

Grade Level 1

Lesson No. 188

Text Pages 108

Lesson Topic: Numerals 17 and 18

Materials needed: Demonstration counting men

Purposes: To help pupils extend the concept and use of place-value numeration to the numbers seventeen and eighteen

Procedures:

I. Prebook Activities
   A. Follow closely the directions given under Prebook Activities on page 108 in teacher's edition.

II. Using the Page
   A. Read aloud the directions for this lesson.
   B. Have pupils count the square-shaped figures on the first picture and then the second picture in panel one.
   C. Have pupils trace the dash lines.
   D. Have pupils work the last panel on their own.

Suggestions for the teacher:
Have pupils do the last panel on their own. Pupils who have difficulty should use the number line strip and number strips, sets of objects, or the counting men before using the pictures.

Grade Level 1

Lesson No. 189

Text Pages 109

Lesson Topic: Numeral 19

Materials needed: Demonstration counting men, 19 flannel board cutouts

Purposes: To help pupils extend the concept and use of place-value numeration to the number nineteen

Procedures:

I. Prebook Activities
   - A. Place fourteen cutouts on the flannel board in a random arrangement.
   - B. Ask several pupils to arrange the cutouts so that the number of the set can be determined quickly and easily.
   - C. Point out that a subset of ten and a subset of four is the best arrangement.

II. Using the Page
   - A. Read the directions aloud for the first panel.
   - B. Check to see if each pupil understands what he is to do.
   - C. Have pupils complete the page independently.

Suggestions for the teacher:

1. Tell pupils that if they need help in spelling any of the number words, they may refer to the two preceding pages and the top panel of this page.
2. If necessary write the words on the board.
3. Pupils who have difficulty should use the number line strip and number strips, a set of objects or counting men.

Grade Level 1

Lesson No. 190

Text Pages 110

Lesson Topic: Place Value

Materials needed: 19 objects for counting

Purposes: To provide pupils a review of place value and practice in recognizing number patterns

Procedures:

I. Prebook Activities
   - A. Ask the children to turn their book to page 110.
   - B. Follow the procedures closely that are suggested in Teacher's Edition.

II. Using the Page
   - A. Read aloud the directions for the first part of the page and allow time for pupils to complete the section individually.
   - B. Use the suggestions in Mathematical Background to relate the first two patterns.
   - C. Pupils should be able to complete the rest of the page independently.

Suggestions for the teacher:

Pupils who have difficulty should use real objects and observe how many more objects must be used to obtain each succeeding number in the pattern.

Grade Level 1

Lesson No. 191

Text Pages After page 110

Lesson Topic: Review 21

Materials needed: Copies of the review

Purposes: To provide review of place value and an evaluation of strengths and weaknesses in learning

Procedures:

I. Pass out copies of test.

II. Work independently as directions indicate. Read directions with the pupils.

III. Collect papers and check.

Suggestions for the teacher:

Evaluate and plan for any reteaching necessary.

Review 21

Name ____________________

Use after page [illegible] of Sets • Numbers • Numerals 1.

Write the correct numeral in each blank.

13 means ___ tens and ___ ones.

17 means ___ tens and ___ ones.

10 means ___ tens and ___ ones.

16 means ___ tens and ___ ones.

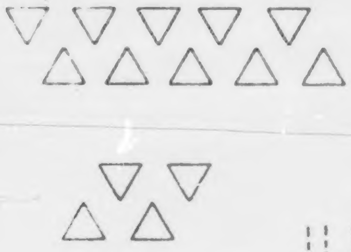
14 means ___ tens and ___ ones.

19 means ___ tens and ___ ones.

15 means ___ tens and ___ ones.

18 means ___ tens and ___ ones.

Write the simplest numeral for the number of each set.



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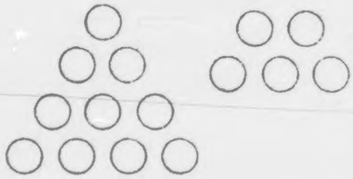

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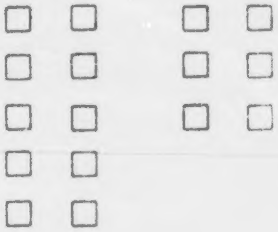

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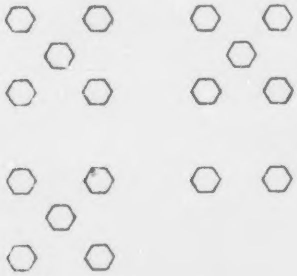

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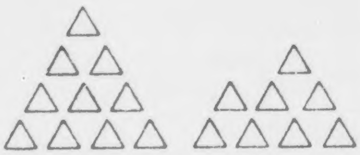

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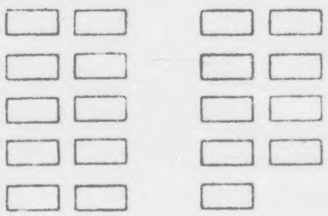

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Grade Level 1

Lesson No. 192

Text Pages 111

Lesson Topic: Number Twenty and Numeral 20

Materials needed: Demonstration counting men

20 flannel board cutouts

Purposes: To help pupils form the place-value concept of the numeral 20

Procedures:

I. Prebook Activities
   - A. Follow step by step the procedures that are suggested under Prebook Activities in Teacher's Edition page 111.

II. Using the Page
   - A. Relate the prebook activities to the first two panels.
   - B. Repeat the process of going from 19 to 20 several times.
   - C. Read aloud the directions for the rest of the page and have pupils proceed individually.

Suggestions for the teacher:
Use the suggestions in Mathematical Background. Use the counting men with those pupils who have difficulty.

Grade Level 1

Lesson No. 193

Text Pages 112

Lesson Topic: Twenty Through Twenty-Nine

Materials needed: Demonstration Counting Men

Purposes: To help pupils extend the place-value concept by writing numerals 21 through 29

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Read the directions aloud. Relate the prebook activities to the first drawing on the page. After explanations, most pupils will be able to complete the rest of the page on their own. If not, they may use the counting men.

Suggestions for the teacher:

Note: Postbook Activities and Mathematical Background on page 112.

Grade Level 1

Lesson No. 194

Text Pages 113-114

Lesson Topic: Place Value

Materials needed: Demonstration Counting Men

Purposes: To help pupils think of place-value numerals as addition numerals

Procedures:

I. Prebook Activities
   Follow the prebook activities very closely.

II. Using the Page
   A. Read the directions aloud.
   B. Have pupils trace over the dashed numerals in the first panel and proceed individually to complete the page.
   C. Pupils who have difficulty should use counting men.

Suggestions for the teacher:
Note: Postbook activities on page 113 in Teacher's Edition.

Grade Level 1

Lesson No. 195

Text Pages 115

Lesson Topic: Number and Numeral

Materials needed: 16 flannel board cutouts

Purposes: To strengthen the pupils' understanding of many numerals for the same number and of the simplest numeral for a number

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Read aloud the directions for the top part of the page. Do first exercise together, allow pupils time to finish the page individually.

Suggestions for the teacher:
Note: Postbook activities on page 115.

Grade Level 1

Lesson No. 196

Text Pages 116-117

Lesson Topic: Multiplies of Ten

Materials needed: Demonstration Counting Men

95 objects (books, blocks, etc.)

Purposes: To help pupils recognize and work with tens from twenty through ninety

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Do the first exercise as a group activity, and have pupils proceed independently. Pupils who have difficulty should use sets of objects and the counting men.

Suggestions for the teacher:
Note: Postbook activities on pages 116-117.

Grade Level 1

Lesson No. 197

Text Pages 118-120

Lesson Topic: Thirty through Sixty

Materials needed: Demonstration Counting men

Numeral cards (20-39), 52 objects (books, blocks, etc.)

Purposes: To help pupils extend the place-value concept by writing numerals through 60

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Read aloud the directions as given. Urge pupils to complete each exercise independently.

Suggestions for the teacher:
Note: Postbook activities on page 118-120.

Grade Level 1

Lesson No. 198

Text Pages After page 120

Lesson Topic: Review 22

Materials needed: Copies of Review 22

Purposes: To review and diagnose learning place value twenty through thirty nine

Procedures:

I. Provide copies of the review for each child.

II. Read directions orally and have the children complete independently.

III. Check papers and evaluate results.

Suggestions for the teacher:
Plan any reteaching activities needed.

Review 22 118 Revised Edition Name ______________________

Use after page ~~105~~ of Sets • Numbers • Numerals 1

Match the names for the same number.

2 tens plus 7
3 tens plus 4
3 tens plus 9
2 tens plus 9
2 tens plus 5
3 tens plus 1
3 tens plus 0
2 tens plus 0
3 tens plus 2
2 tens plus 3
3 tens plus 7

34
39
29
25
31
27
37
30
20
32
23

30 + 9
20 + 9
20 + 5
30 + 1
30 + 4
30 + 7
20 + 7
20 + 0
30 + 0
30 + 2
20 + 3

Grade Level 1

Lesson No. 199

Text Pages 121

Lesson Topic: Numeration Table

Materials needed: None

Purposes: To help pupils extend their understanding of natural order of whole numbers 0-60

Procedures:

I. Prebook Activities
Follow the prebook activities as given.

II. Using the Page
Explain the direction "Complete the Table." Allow time for pupils to complete the table on their own. Read the directions for the lower part of the page.

Suggestions for the teacher:
Note: Enrichment activities on page 120. Teacher's Edition.

Grade Level 1

Lesson No. 200

Text Pages After page 121

Lesson Topic: Review 23

Materials needed: Review sheets for each pupil

Purposes: To review the tens concept through the nineties

Procedures:

I. Pass out copies to each pupil.

II. Read and direct the children to follow instructions and work independently.

III. Pass in papers to be checked.

Suggestions for the teacher:
Evaluate and plan reteaching activities as needed.

Review 23 Name ______________________

Use after page 108 of Sets • Numbers • Numerals 1

Write the simplest numeral in each ___ and in each ☐.

47 means ___ tens plus ___. 40 + 7 = ☐

53 means ___ tens plus ___. 50 + ☐ = 53

64 means ___ tens plus ___. ☐ + 4 = 64

69 means ___ tens plus ___. 60 + ☐ = 69

76 means ___ tens plus ___. 70 + 6 = ☐

3 means ___ tens plus ___. ☐ + 8 = 78

80 means ___ tens plus ___. 80 + ☐ = 80

83 means ___ tens plus ___. 80 + 3 = ☐

85 means ___ tens plus ___. ☐ + 5 = 85

92 means ___ tens plus ___. 90 + ☐ = 92

94 means ___ tens plus ___. ☐ + 4 = 94

Grade Level 1

Lesson No. 201

Text Pages 122

Lesson Topic: Numeration through 79

Materials needed: Demonstration counting men, 62 objects (books, blocks, sticks, etc.)

Purposes: To help pupils extend their understanding and use of place-value numeration through 79

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Relate panel 1 directly to the next count if another object is displayed in Prebook Activities. Read the directions aloud and let the pupils complete the page independently.

Suggestions for the teacher:
Note: Postbook activities on page 122.

Grade Level 1

Lesson No. 202

Text Pages 123

Lesson Topic: Numeration through 99

Materials needed: Demonstration Counting men

Purposes: To help pupils extend their understanding and use of place-value numeration through 99

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Read aloud the directions for the lesson. Do the first panel as a group activity.

Suggestions for the teacher:

Note: Postbook activities on page 123

Grade Level 1

Lesson No. 203

Text Pages 124

Lesson Topic: Number Patterns

Materials needed: None

Purposes: To help pupils recognize and work with number patterns

Procedures:

I. Prebook Activities
   Follow the prebook activities very closely.

II. Using the page
   A. Read aloud the directions at the top of the page.
   B. Encourage pupils to complete this panel independently.
   C. Read aloud the directions for the lower panel.

Suggestions for the teacher:

Note: Postbook activities on page 124.

Grade Level 1

Lesson No. 204

Text Pages 125

Lesson Topic: Natural Order of Numbers

Materials needed: Demonstration counting men

Purposes: To strengthen the pupils' understanding of the natural order of whole numbers

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
- A. Read the directions aloud.
- B. Discuss the first exercise as a group activity and have pupils proceed independently.

Suggestions for the teacher:

Note: Postbook activities on page 125.

Grade Level 1

Lesson No. 205

Text Pages After page 125

Lesson Topic: Review 24

Materials needed: Copies of review

Purposes: To review understanding of natural order of whole numbers and to discover patterns

Procedures:

I. Distribute copies of the test.

II. Work page independently.

III. Evaluate results and note weaknesses.

Suggestions for the teacher:
Use evaluation to determine whether reteaching is needed.

Review 24 Name ______ ______ ______

Use after page [illegible] of Sets • Numbers • Numerals I

Complete each row to show "one more" order.

____, 23, ____

____, 39, ____

____, 41, ____

____, 50, ____

____, 68, ____

____, 79, ____

____, 81, ____

____, 95, ____

____, 98, ____

____, 62, ____

____, 89, ____

____, 71, ____

Discover the pattern and complete each row.

55, 56, 57, 58, ___, ___, ___, ___

74, 73, 72, 71, ___, ___, ___, ___

10, 12, 14, 16, ___, ___, ___, ___

15, 20, 25, 30, ___, ___, ___, ___

Grade Level 1

Lesson No. 206

Text Pages 126

Lesson Topic: Numeration Table

Materials needed: None

Purposes: To help pupils extend their understanding of natural order of the whole numbers 0-99

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Read the directions aloud, relate prebook activities to the table, and have pupils complete the table independently.

Suggestions for the teacher:
Note: Postbook activities on page 126.

Grade Level 1

Lesson No. 207

Text Pages 127

Lesson Topic: Numeration Practice

Materials needed: Demonstration counting men

Purposes: To extend pupils' skill in working with place-value numeration

Procedures:

I. Prebook Activities
Follow the prebook activities very closely.

II. Using the Page
Read the directions aloud and do the first exercise as a complete page.

III. Check the page.

Suggestions for the teacher:

Grade Level 1

Lesson No. 208

Text Pages 128

Lesson Topic: Checkup Time

Materials needed: None

Purposes: To provide pupils an opportunity to review the concepts of this unit and to evaluate their understanding for these concepts

Procedures:

I. Using the page
   - A. Read aloud the directions for each part of the exercise.
   - B. Pupils should complete the sentences and solve the equations independently.

II. Check the page.

Suggestions for the teacher:

Note: Postbook activities on page 128

Grade Level 1

Lesson No. 209

Text Pages After page 128

Lesson Topic: Test 5

Materials needed: Test copies for each pupil

Purposes: To test the concepts of this unit and to evaluate understanding of these concepts. (The tens concept)

Procedures:

I. Read aloud the directions for the test, after distributing copies for the test.

II. Collect papers and check.

III. Diagnose and evaluate results.

Suggestions for the teacher:
Plan for any reteaching or review if necessary.

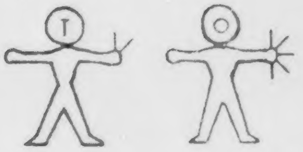
Independent Test 5

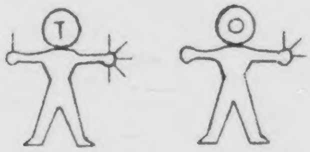
Name

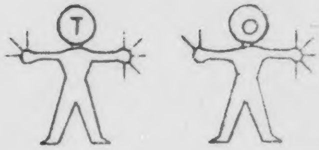
. or pages [redacted] of Sets • Numbers • Numerals 1

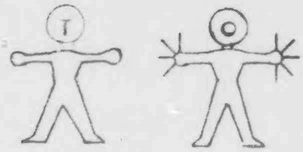
AFTER REVISED EDITION

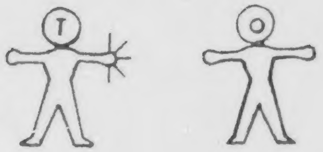
Write the simplest numeral for the number shown by the counting men.

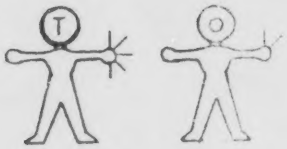


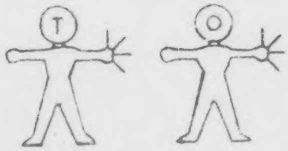


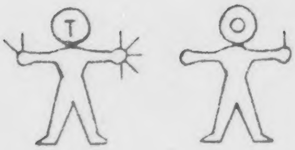


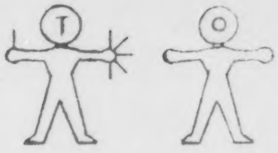












Write the correct numeral in each blank. Then write he correct numeral in each

32 means ___ tens plus ___. $30 + 2 = \square$

76 means ___ tens plus ___. $70 + \square = 76$

6 means ___ tens plus ___. $\square + 6 = 6$

59 means ___ tens plus ___. $\square + 9 = 59$

95 means ___ tens plus ___. $95 = 90 + \square$

Discover the pattern and complete each row.

0, 2, 4, 6, ___, ___, ___, ___

10, 20, 30, 40, ___, ___, ___, ___

3, 4, 5, 6, ___, ___, ___, ___

1, 3, 5, 7, ___, ___, ___, ___

10, 11, 12, 13, ___, ___, ___, ___

55, 56, 57, 58, ___, ___, ___, ___

Grade Level 1

Lesson No. 210

Text Pages 129

Lesson Topic: Number squares

Materials needed: Number strips

Purposes: To provide pupils a review of the addition and subtraction combinations through five

Procedures:

I. Prebook Activities
Follow this activity very closely.

II. Using the Page
Read aloud the directions for the page. Then relate the Prebook Activities to panel 1 and have pupils solve the equations in that panel. Proceed with the rest of the directions as given.

Suggestions for the teacher:
Note: Postbook Activities and Mathematical Background on page 129

Grade Level 1

Lesson No. 211

Text Pages 130

Lesson Topic: Number Squares

Materials needed: Number strips

Purposes: To help pupils discover and understand the addition combination of ten

Procedures:

I. Prebook Activities

Follow the prebook activities very closely.

II. Using the Page

A. Pupils should compare the nine square they have constructed to the nine square in panel 1 and find the sum for each addition given.

B. Proceed with directions as given.

Suggestions for the teacher:

Grade Level 1

Lesson No. 212

Text Pages 131

Lesson Topic: Sum of Ten

Materials needed: Number strips

Number line strip

Purposes: To provide pupils further practice with the addition pairs of ten

Procedures:

I. Prebook Activities
   Follow the prebook activities very closely.

II. Using the Page
   - A. Direct attention to panel 1 and read the directions aloud.
   - B. Pupils who have difficulty may use their number strips.
   - C. Check the page.

Suggestions for the teacher:
Enrichment activities - Use activity 10, page vi for sums of ten or less.

Grade Level 1

Lesson No. 213

Text Pages 132

Lesson Topic: Addition Combinations of Ten

Materials needed: 10 flannel board cutouts of 0's (preferably 6 of one color and 4 of a different color) number cards 0-10, one card each for + and =

Purposes:

To increase the pupils' understanding of the addition combinations of ten

Procedures:

I. Prebook Activities
   Follow this activity very closely.

II. Using the Page
   A. Direct attention to the first row on page 132. Relate this to the flannel board display.
   B. Read the directions aloud.
   C. Pupils should complete the page on their own.

Suggestions for the teacher:
Note: Postbook activities on page 132.

Grade Level 1

Lesson No. 214

Text Pages 133

Lesson Topic: Subtraction combinations of ten

Materials needed: 10 flannel board cutouts of O's numeral cards 0-10, one card for each of +, -, and =

Purposes: To increase the pupils' understanding of subtraction as the inverse operation of addition

Procedures:

I. Prebook Activities
   Follow the prebook activities very closely.

II. Using the page
   A. Direct attention to the first row and point out that on the printed page we cannot remove the shapes, nor can we erase them, so let us cross them out to make believe that they are removed.
   B. Pupils should complete the page independently.

Suggestions for the teacher:

Note: Postbook activities and Mathematical Background

Grade Level 1

Lesson No. 215

Text Pages After page 133

Lesson Topic: Review 25

Materials needed: Copies of the review

Purposes: To review addition and subtraction combinations of ten

Procedures:

I. Pass out copies of the review.

II. Work independently as directed by the teacher.

III. Pass in papers and check all answers.

Suggestions for the teacher:
Evaluate and determine any needed practice or reteaching to be used.

Review 25

Name ______________________

Use after page ~~[illegible]~~ of Sets • Numbers • Numerals 1
133 Rev[illegible]

Write the simplest numeral in each ☐.

0 + ☐ = 10

☐ + 9 = 10

2 + 8 = ☐

3 + ☐ = 10

☐ + 6 = 10

5 = ☐ − 5

☐ = 10 − 4

0 = 10 − ☐

1 = 10 − ☐

8 = ☐ − 2

Add or subtract.

2 + 8	4 + 5	3 + 7	2 + 6	6 + 4
10 − 3	10 − 5	10 − 8	10 − 6	10 − 0
10 − 4	10 − 1	10 − 9	10 − 7	10 − 10

Grade Level 1

Lesson No. 216

Text Pages 134-135

Lesson Topic: Adding and Subtracting on a Number Line

Materials needed: Number strips and number-line strip (0-20)

Purposes: To help pupils illustrate addition and subtraction on a number line

Procedures:

I. Prebook Activities
Follow this activity very closely.

II. Using the Page
Read the directions aloud and complete the first two exercises as class discussion. Pupils should then complete the page on their own.

Suggestions for the teacher:
Note: Postbook activities on page 1, 4 and 135.

Grade Level 1

Lesson No. 217

Text Pages 136

Lesson Topic: Solving Equations

Materials needed: None

Purposes: To help pupils become more proficient in solving equations

Procedures:

I. Prebook Activities
   Follow the prebook activities as given.

II. Using the page.
   A. Read the directions for the page.
   B. Then solve the equations in the first two panels as a class activity.
   C. Then have the pupils complete the page on their own.

Suggestions for the teacher:

Grade Level 1

Lesson No. 218

Text Pages After page 136

Lesson Topic: Review 26

Materials needed: Copies of the review

Purposes: To review and evaluate learning addition and subtraction, solving equations

Procedures:
1. Distribute a copy of the review to each pupil.
2. Read directions, making sure each child understands what to do.
3. Work independently until finished.
4. Pass in papers to be corrected.

Suggestions for the teacher:
Evaluate and plan other reteaching exercises if necessary.

Review 26

Name____________________________

Use after page [illegible] of Sets • Numbers • Numerals 1.

Write the simplest numeral in each $\underline{\quad}$ and in each $\square$.

$$4 + (2 + 3) = 4 + \underline{\quad} = \square$$

$$(1 + 8) + 1 = \underline{\quad} + 1 = \square$$

$$2 + (1 + 7) = 2 + \underline{\quad} = \square$$

$$(3 + 5) + 2 = \underline{\quad} + 2 = \square$$

$$3 + (5 + 2) = 3 + \underline{\quad} = \square$$

Write the simplest numeral in each $\square$.

$4 + 3 = \square - 2$

$5 + \square = 3 + 7$

$0 + \square = 1 + 4$

$6 - 2 = \square + 2$

$8 - \square = 4 + 4$

$5 + 4 = 9 + \square$

$\square - 4 = 3 + 3$

$10 - 7 = 8 - \square$

$10 - \square = 1 + 1$

$5 + 2 = 0 + \square$

$\square + 3 = 6 + 4$

$8 - 3 = \square - 5$

Grade Level 1

Lesson No. 219

Text Pages 137-138

Lesson Topic: Solving Problems

Materials needed: 6 books

Purposes: To help pupils solve verbalized problems by first translating them into open sentences

Procedures:

I. Prebook Activities
   Follow prebook activities as given.

II. Using the Page
   A. Read the directions aloud.
   B. Work the first panel as a group activity.
   C. Pupils should complete the page on their own.

Suggestions for the teacher:
Note: Mathematical Background on page 137-138.

Grade Level 1

Lesson No. 220

Text Pages 139

Lesson Topic: Checkup Time

Materials needed: None

Purposes: To provide pupils an opportunity to review the concepts of unit and to evaluate their understanding of these concepts.

Procedures:

I. Using the page

  A. Read aloud the directions for the first panel.

  B. Pupils are to complete the panel on their own.

  C. After the first panel is completed, read the directions for the lower panel.

Suggestions for the teacher:

Grade Level 1

Lesson No. 221

Text Pages After 139

Lesson Topic: Test 6

Materials needed: Copies of test.

Purposes: To evaluate the concepts of Unit 8, addition and subtraction combinations of ten.

Procedures:

I. Distribute a copy of the test to each pupil

II. Read aloud the directions. Pupils are to complete the panel on their own.

III. Warn the children to observe the operation sign since both addition and subtraction are involved.

Suggestions for the teacher:

Analyze the pupils performance. If particular difficulties are noted still, special reteaching should be done before moving on to more advanced concepts.

Independent Test 6

Name____________________

For pages ~~[illegible]~~ of Sets • Numbers • Numerals 1.
after 134

Write the correct numeral in each ☐ .

8 + 2 = ☐ 2 + 8 = ☐ 10 − 8 = ☐

4 + ☐ = 10 10 − ☐ = 4 10 − 5 = ☐

☐ + 3 = 10 10 − 3 = ☐ 10 + ☐ = 10

Add or subtract.

1	7	6	5	3	8
+ 9	+ 3	+ 2	+ 4	+ 7	+ 2

10	10	10	9	7	10
− 5	− 6	− 10	− 3	− 4	− 9

4	1	3	6	2	5
+ 4	+ 6	+ 5	+ 4	+ 7	+ 5

10	9	10	8	6	10
− 0	− 7	− 7	− 4	− 3	+ 0

Write an arithmetic sentence for each problem.
Solve the equation. Write the answer.

Betsy had 6 books.
Mark had 4 books.

They have ____ books in all.

____

Kathy had 10 toys.
She gave 3 of them away.

Now she has ____ toys.

____

David had 4 pennies.
Mother gave him 3 pennies.

Now he has ____ pennies.

____

Mary drew 9 pictures.
She lost 4 of them.

She has ____ pictures left.

____

Grade Level 1

Lesson No. 222

Text Pages 140-141

Lesson Topic: The Sum of Three Numbers

Materials needed: Six flannel board cutouts

Yarn

Purposes: To help pupils discover the concept of the associative property of addition.

Procedures:

I. Prebook Activities

Follow the prebook activities very closely.

II. Using the Page

A. Read the directions aloud.

B. Relate the chalkboard drawing of prebook activities to panel 1.

C. Have pupils trace over the dashed triangles and complete the addition sentence.

D. Pupils should complete last panel on their own.

Suggestions for the teacher:

Note: Postbook activities and Mathematical Background page 140.

Grade Level 1

Lesson No. 223

Text Pages 142

Lesson Topic: Using Ten in Addition

Materials needed: 15 flannel board cutouts

Yarn

Purposes: To introduce pupils to the idea of using ten when adding three or more numbers.

Procedures:

I. Prebook Activities

   A. Follow very closely the prebook activities that are suggested in teacher's edition page 142.

   B. Emphasize again that the number named by numerals in parentheses are to be added first.

II. Using the Page

   A. Read the directions aloud.

   B. Relate the prebook activities to the first exercise in panel one.

   C. Give individual help where needed.

   D. Do the last exercise in the first panel as a class activity.

   E. Have pupils complete the rest of the page on their own.

Suggestions for the teacher:

Pupils who have difficulty may use sets of objects to represent each mathematical expression before recording numerals.

Grade Level 1

Lesson No. 224

Text Pages 143

Lesson Topic: Using Ten in Addition

Materials needed: 16 objects

Purposes: To further emphasize the advantage of using the idea of ten in addition.

Procedures:

I. Prebook Activities

A. Separate 16 objects into a set of 8, a set of 6, and place them along a chalkrail.

B. Above each set have pupils record the number of that set.

C. Follow closely the procedures suggested in teacher's edition page 143.

II. Using the Page

A. Read the directions aloud and relate the prebook activities to the first exercise in panel one.

B. Have pupils do the rest of the page independently.

C. Check pupils' work closely.

D. Give individual help where needed.

Suggestions for the teacher:
Enrichment Activities

Prepare a worksheet of the following open sentences.

8 + 2 + 4 = ()   5 + 5 + 4 = ()   1 + 9 + 8 = ()   2 + (3 + 7) = ()

6 + 7 + 3 = ()   2 + 10 = ()   2 + 3 + 7 = ()   12 = ()

Grade Level 1

Lesson No. 225

Text Pages 144

Lesson Topic: Making Sets of Ten

Materials needed: 13 objects for each pupil

Purposes: To help pupils discover how renaming numbers, thinking of ten, and associating addends makes addition easy.

Procedures:

I. Prebook Activities

  A. Have each pupil place ten objects on his desk.

  B. Have him to separate the objects into any two subsets of his choice.

II. Using the Page

  A. Read the directions aloud and have pupils study the first panel.

  B. Have pupils study the second panel and ask questions to help pupils discover that the set of 7 is separated into a subset of 2 and a subset of 5 and that the subset of 5 is to be joined to the set of 5.

  C. Give individual help where needed.

  D. Encourage pupils to ask questions about the lesson.

Suggestions for the teacher:
For pupils having difficulty, suggest that they use real objects to duplicate what is shown in each panel.

Check closely Mathematical Background.

Grade Level 1

Lesson No. 226

Text Pages 145

Lesson Topic: Addition Practice

Materials needed: 11 objects (blocks, bottle caps, etc.)

Purposes: To provide pupils with practice in using the idea of ten to find sums greater than ten.

Procedures:

I. Prebook Activities

A. Copy the following on the board.

```
 3        +        8
xxx            xxxxxxxx
```

B. Have pupils place 11 objects, separated into a set of 3 and a set of 8 on their desk.

C. Ask: How many objects must be joined to the set of 8 to get a set of ten?

D. Follow procedures suggested in teacher's edition page 145.

II. Teaching the page

A. Read the directions aloud.

B. Relate the prebook activities to the first panel.

C. Have pupils complete the page independently.

Suggestions for the teacher:
Pupils who have difficulty should use sets of objects to help them find the sum.

Grade Level 1

Lesson No. 227

Text Pages 146

Lesson Topic: Addition Practice

Materials needed: 11 objects (blocks, bottle tops and etc.)

Purposes: To provide pupils with practice in using the idea of ten to find sums greater than ten.

Procedures:

I. Prebook Activities

A. To introduce the lesson on this page, use the same idea and follow the procedures presented in the preceding lesson page 145.

B. After you have completed the introduction, copy the following on the board.

$$\begin{array}{r} 3 \\ +8 \\ \hline \end{array} \qquad \begin{array}{l} 2+1 \\ +8 \\ \hline 10+1=(\ ) \end{array} \qquad \begin{array}{r} 8 \\ +3 \\ \hline \end{array} \qquad \begin{array}{l} 7+1 \\ +3 \\ \hline 10+1=(\ ) \end{array}$$

II. Using the Page

A. Read the directions aloud and relate the prebook activities to the first panel.

B. Have pupils complete the page independently.

Suggestions for the teacher:

Pupils who have difficulty should use sets of real objects to help them find the sum. Check Mathematical Background very closely.

Grade Level 1

Lesson No. 228

Text Pages 147

Lesson Topic: Addition Practice

Materials needed: 13 objects (books, bottle caps, etc.)

Purposes: To provide pupils practice in finding a sum that is greater than ten.

Procedures:

I. Prebook Activities

  A. Have pupils place thirteen objects, separated into a set of 7 and a set of 6 on their desk.

  B. Let pupils show how they can separate the set of 7 or the set of 6 so that a set of ten and a set whose number is less than ten can be formed. Follow procedures suggested in teacher's edition.

II. Using the Page

  A. Read the directions aloud.

  B. Relate the prebook activities to the first equation in the lesson.

  C. Have pupils complete the page independently.

  D. Check pupils work.

  E. Give individual help where needed.

Suggestions for the teacher:
Pupils who have difficulty should use sets of objects to help them find each sum.

Grade Level 1

Lesson No. 229

Text Pages 148

Lesson Topic: Addition Table

Materials needed:

Purposes: To strengthen the pupils' understanding of the construction and use of an addition table.

Procedures:

I. Prebook Activities

   A. Review the construction of an addition table.

   B. See teaching suggestions for page 76.

   C. Include enough of the table so that sums through 18 need to be determined and named in the table.

II. Using the Page

   A. Read the directions aloud.

   B. Allow time for pupils to complete the table.

   C. Help pupils discover the following patterns in the table. (Note) These patterns are listed on page 148 in teacher's edition.

   D. See that each pupil has a complete correct table.

Suggestions for the teacher:
Enrichment Activities

As a pupil points to a numeral in the body of a large addition table, other pupils are to state or write an addition sentence in which that numeral names the sum.

Grade Level 1

Lesson No. 230

Text Pages 149

Lesson Topic: Addition Practice

Materials needed:

Purposes: To afford pupils' practice with the basic addition combinations

Procedures:

I. Prebook Activities

A. Use any basic addition combination in an open sentence on the board.

Example: 3 + 8 = ()

B. Ask: How can you solve this equation?

C. Ask a pupil to write the correct numeral in the () in the sentence on the board.

II. Using the Page

A. Read the directions aloud.

B. Instruct pupils to find each result and then check the result by using the table on page 148.

C. Encourage pupils to complete the entire page independently.

Suggestions for the teacher:
Enrichment Activities

Have pupils pick out any square section of the table on page 148 as shown below.

2	3
3	4

or

6	7
7	8

or

8	9
9	10

Then have them find the sum of the numbers named on each diagonal. For example in the first square they would find 2 + 4 = 6 and 3 + 3 = 6.

Grade Level 1

Lesson No. 231

Text Pages 150

Lesson Topic: Do and Undo-Inverse Operations

Materials needed: Number-line strips

Number strips

Purposes: To extend the pupils' understanding of subtraction and addition as inverse operations.

Procedures:

I. Prebook Activities

   A. Review the use of number strips by solving these equations 4 + 8 = ()
   9 + 5 = () 12 - 8 = () 14 - 5 = ()

   B. Have pupils to solve these equations by using their number line strips as a number and drawing appropriate arrows.

   C. Follow closely the procedures that are suggested in teacher's edition page 150.

II. Using the Page

   A. Read aloud both questions in panel 1.

   B. Let pupils trace the dashed numeral 4 and solve the next equation.

   C. Emphasize the inverse action by using the ones that are listed in teacher's edition.

Suggestions for the teacher:

Pupils who have difficulty solving the equations may use number strips or number line drawing.

Grade Level 1

Lesson No. 232

Text Pages 151

Lesson Topic: Do and Undo-Inverse Operations

Materials needed: Any visual aids - number strips, etc.

Purposes: To strengthen the pupils' understanding of inverse operations.

Procedures:

I. Prebook Activities

A. Tell the pupils to turn their books to page 151.

B. Follow step by step the procedures that are suggested under this activity.

II. Using the Page

A. Read aloud the directions for panel one.

B. Allow time for pupils to complete this panel.

C. Follow a similar procedure for each panel.

Suggestions for the teacher:

Pupils who have difficulty may use any visual aids, number strips, etc., in determining inverse pairs.

Grade Level 1

Lesson No. 233

Text Pages 152

Lesson Topic: Subtraction

Materials needed: Number Line strip

13 objects (books, blocks, etc.)

Purposes: To help pupils discover a convenient method of subtracting a number less than ten from a number between ten and twenty.

Procedures:

I. Prebook Activities

A. Place 13 objects on the table and inform pupils that 7 of the objects are to be removed from the set.

B. Have pupils to make suggestions as to how this might be.

II. Using the Page

A. Relate the removal of all 7 objects to the first number line drawing.

B. Continue this activity until the pupils are able to work independently.

C. Emphasize the use of addition and subtraction combinations of ten by using the following:

$6 + 7 = ()$ $(6 + 4) + 3 = ()$ $13 = ()$ $13 - (3 + 4) = ()$

$6 + (4 + 3) = ()$ $10 + 3 = ()$ $13 - 7 = ()$ $(13 - 3) - 4 = ()$

$10 - 4 = ()$ $6 = ()$

Suggestions for the teacher:

Pupils who have difficulty may use real objects or other manipulative aids to help them.

Grade Level 1

Lesson No. 234

Text Pages 153

Lesson Topic: Subtraction

Materials needed: 15 objects (books, blocks, etc.)

Purposes: To reinforce pupils' understanding of a convenient method of subtracting a number less than ten from a number between ten and twenty.

Procedures:

I. Prebook Activities
   - A. Use a set of 15 objects to introduce this lesson.
   - B. Follow the procedures presented in prebook activities on page 152, including removing 5 objects and then 2 objects.
   - C. Copy the exercise from the teacher's edition on the board.

II. Using the Page
   - A. Read the directions aloud.
   - B. Relate the prebook activities to the first panel and have pupils write the correct numeral in each blank in panel 1.
   - C. Be sure that pupils understand that 7 has been renamed as 5 + 2.
   - D. Have pupils complete the page independently.

Suggestions for the teacher:
Pupils who have difficulty should use sets of objects or a number line to help them solve each equation.

Note: Mathematical Background

Grade Level 1

Lesson No. 235

Text Pages 154

Lesson Topic: Subtraction

Materials needed: Number line strip

Purposes: To provide pupils practice in subtraction involving numbers between zero and twenty.

Procedures:

I. Prebook Activities

   A. Write the following open sentences on the board: 11 - 3 = ().

   B. Follow procedures suggested in teacher's edition.

II. Using the Page

   A. Read the directions aloud.

   B. Inform pupils that they may use their number line strips in case they are not sure of the answer.

   C. Give individual help where needed.

   D. Check pupils' books.

Suggestions for the teacher:

Enrichment Activities

Use activity 10, page VI, but adapted to subtraction in which the greater number used is less than twenty.

Grade Level 1

Lesson No. 236

Text Pages After 154

Lesson Topic: Review 28

Materials needed: Copies of Review

Purposes: To test understanding of addition and subtraction beyond ten.

Procedures:

I. Distribute copies of Review 28 to each pupil.

II. Work independently as teacher has directed orally, being careful to watch + and - signs.

III. Collect papers to be checked.

Suggestions for the teacher:
Analyze pupils' performance and do any necessary reteaching before going on to more advanced concepts.

Review 28

Name ______________________

Use after page ~~134~~ of Sets • Numbers • Numerals

150

Find each sum or difference.

7 + 8	9 + 4	6 + 6	5 + 6	7 + 9
15 − 8	13 − 4	12 − 6	11 − 6	16 − 9
15 − 7	13 − 9	12 − 0	11 − 5	16 − 7

Write four sentences with each set of numerals.

{4, 7, 11}	{15, 6, 9}
___ + ___ = ___	___ + ___ = ___
___ − ___ = ___	___ − ___ = ___
___ + ___ = ___	___ + ___ = ___
___ − ___ = ___	___ − ___ = ___

Grade Level 1

Lesson No. 237

Text Pages 155

Lesson Topic: Subtraction

Materials needed:

Purposes: To help pupils understand how an addition table is used to solve subtraction equations.

Procedures:

I. Prebook Activities

  A. Review the construction of an addition table.

  B. Check the prebook activities on page 76.

  C. Review the procedures for finding sums with an addition table as presented in Mathematical Background on page 148.

  D. Follow closely the procedures that are suggested in teacher's edition.

II. Using the Page

  A. Read aloud the directions above the table.

  B. Follow step by step the procedures that are presented in prebook activities on page 155.

  C. Have pupils complete the page independently.

Suggestions for the teacher:
Pupils who have difficulty may use sets of objects to help them find each difference.

Grade Level 1

Lesson No. 238

Text Pages 156

Lesson Topic: Addition and Subtraction Practice

Materials needed:

Purposes: To afford pupils practice with the basic addition and subtraction combinations.

Procedures:

I. Prebook Activities

   A. Use any basic addition combination in an open sentence on the board.

   B. Ask "How can you solve this equation?"

   C. Ask a pupil to write the correct numeral in the sentence on the board.

   D. Write a sentence for the corresponding subtraction (the inverse) using the following: $7 + 6 = 13 \qquad 13 - 6 =$

II. Using the Page

   A. Read the directions aloud.

   B. Instruct pupils to find each result.

   C. Check results by using the table on page 155.

   D. Encourage pupils to complete the page independently.

Suggestions for the teacher:

Enrichment Activities:

To emphasize the use of the combinations of ten, pupils may find subtraction results as follows:

$$\begin{array}{r} 11 \\ -8 \\ \hline \end{array} \qquad \begin{array}{r} 1 + 10 \\ -\ 8 \\ \hline 1 + \ 2 \end{array} = 3 \qquad \begin{array}{r} 11 \\ -3 \\ \hline \end{array} \qquad \begin{array}{r} 1 + 10 \\ -\ 3 \\ \hline 1 + \ 7 \end{array} = 8$$

Grade Level 1

Lesson No. 239

Text Pages 157

Lesson Topic: Checkup Time

Materials needed:

Purposes: To provide pupils an opportunity to review the concepts of this unit and to evaluate their understanding of these concepts.

Procedures:

I. Using the Page

  A. Read the directions for each panel aloud, calling particular attention to the fact that both addition and subtraction exercises are included and that pupils must be alert to watch for the + or - sign.

  B. Have pupils to complete the entire page independently.

Suggestions for the teacher:

Independent Test - pp. 140-157

Independent Test 7

Name____________________________

For pages 129-146 of Sets • Numbers • Numerals 1.

174

Write 4 sentences for each set of numerals. You may use the = sign and either + or −.

{5, 8, 13}   {6, 10, 16}   {50, 20, 30}

Add or subtract.

5 + 9	8 + 3	6 + 7	15 + 4	32 + 6
16 − 9	12 − 5	14 − 8	15 − 5	17 − 3
40 + 20	69 − 7	81 + 6	90 − 50	57 − 10

Read each problem. Write an equation. Find the answer.

Jack had 12 goldfish.
Then 2 of them died.

He had ____ goldfish left.

____

Sue had 24 pennies.
Father gave her 5 more pennies.

Now she has ____ pennies.

____

Ann picked 4 tulips.
Then she picked 9 pansies.

She picked ____ flowers in all.

____

Bill had 34 nails.
He used 10 of them.

He has ____ nails left.

____

Grade Level 1

Lesson No. 241

Text Pages 158

Lesson Topic: Finding Sums

Materials needed: Number line strip, 17 objects, (book, blocks, etc.)

Purposes: To help pupils perform addition when one addend is greater than ten and the sum is less than twenty.

Procedures:

I. Prebook Activities

  A. Display two distinct sets of objects containing 12 objects and 5 objects, respectively.

  B. Ask a pupil to give an open addition sentence for these two sets (12 + 5 + _)

  C. Follow step by step the procedures that are suggested in teacher's edition.

II. Using the Page

  A. Relate the prebook activities to the set pictures on this page.

  B. Repeat the grouping and arranging with real objects as the set pictures are discussed.

  C. Complete the page and give individual help where needed.

Suggestions for the teacher:

Pupils who have difficulty may use sets of objects to help them find each answer.

Grade Level 1

Lesson No. 242

Text Pages 159

Lesson Topic: Using Expanded Notation

Materials needed: 20 objects (books, blocks, etc.)

Purposes: To help pupils extend the concept of addition through the use of expanded notation.

Procedures:

I. Prebook Activities

  A. Place 2 sets on a table - one containing 13 objects and the other containing 5 objects.

  B. Review the rearranging of objects.

II. Using the Page

  A. Relate the prebook activities to the first exercise on the page.

  B. Emphasize that 13 has been renamed as 10 + e, then 5 is added to 3, and finally, the sum of 3 and 5 is added to ten.

  C. Complete the page.

  D. Urge pupil to work independently.

Suggestions for the teacher:

Pupils who experience difficulty should use sets of real objects, separate the large set so that one subset contains 10 objects, and then join the sets.

Grade Level 1

Lesson No. 243

Text Pages 160

Lesson Topic: Using Place Value in Addition

Materials needed:

Purposes: To help pupils discover a convenient rule or algorism for finding sums less than twenty.

Procedures:

I. Prebook Activities

A. Indicate on the board the vertical notation for 12 + 5

B. Review the idea of using expanded notation to find the sum and have a pupil write the solution steps by using expanded notation.

$$\begin{array}{r} 12 \\ +5 \\ \hline \end{array} \qquad \begin{array}{r} 10 + 2 \\ + 5 \\ \hline 10 + 7 \end{array} = 17$$

II. Using the Page

A. Direct attention to the first exercise.

B. Read the directions aloud.

C. Urge pupils to complete the page by themselves. Give individual help where necessary.

Suggestions for the teacher:

Pupils who have difficulty may repeat the complete sequence for more of the exercise.

Note: Mathematical Background.

Grade Level 1

Lesson No. 244

Text Pages 161

Lesson Topic: Column Addition

Materials needed:

Purposes: To help pupils strengthen their concept of the addition algorism.

Procedures:

I. Prebook Activities

A. Write on the board the following problem. John had 15 pennies. His father gave him 3 more pennies. How many pennies did he have then?

B. Follow closely the procedures suggested in teacher's edition page 161.

II. Using the Page

A. Read the directions aloud.

B. Check closely to see if pupils understand what they are to do.

C. Encourage pupils to complete the page on their own.

Suggestions for the teacher:

Pupils who have difficulty may use a grid, expanded notation, or concrete aids in finding a particular sum. Check very closely Mathematical Background.

Grade Level 1

Lesson No. 245

Text Pages 162

Lesson Topic: Subtraction

Materials needed: Demonstration counting men, 15 objects (books, blocks, etc.)

Purposes: To help pupils develop a method for subtracting a number less than ten from a number between ten and twenty.

Procedures:

I. Prebook Activities

A. Follow closely the procedures that are suggested in teacher's edition under prebook activities page 162.

II. Using the page

A. Read the directions aloud.

B. Relate the previous activities to the first panel. Have pupils write the correct numeral in each.

C. Follow closely the procedures listed.

Suggestions for the teacher:

Use the explanation as suggested in Mathematical Background.

Grade Level 1

Lesson No 246

Text Pages 163

Lesson Topic: Using Place Value in Subtraction

Materials needed:

Purposes: To help pupils discover a convenient rule or algorism for subtraction

Procedures:

I. Prebook Activities

A. Follow closely the procedures that are stated in teacher's edition page 163.

II. Using the page

A. Direct attention to the first panel and relate it to the prebook activities.

B. Read aloud the directions for the rest of the page and do the first exercise together.

C. Give individual help where needed.

Suggestions for the teacher:

Pupils who have difficulty may use sets of objects, counting men, or other aids in determining a particular difference.

Grade Level 1

Lesson No. 247

Text Pages After page 163

Lesson Topic: Review or practice (optional)

Materials needed: Copies of the review

Purposes: To strengthen or extend concepts of addition and subtraction beyond ten.

Procedures:

I. Pass out copies of Review 29.

II. Work independently as directed. Directions may be read with the children. Call to their attention that they should be careful to read the operational signs correctly, since both are present.

III. Check all papers.

Suggestions for the teacher:

This may be used for practice or evaluation as it seems necessary to you.

Review 29

Name ______________________

Use after page ~~137~~ of Sets • Numbers • Numerals 1.

[illegible]

Find each sum or difference.

13 + 5	12 + 7	14 + 3	14 + 0	5 + 13
18 − 5	19 − 7	17 − 3	14 − 0	14 − 14
13 + 2	15 + 1	11 + 6	14 + 5	5 + 14
15 − 2	16 − 1	17 − 6	19 − 5	0 + 18
12 + 5	12 − 5	17 + 2	17 − 2	18 − 18

Grade Level 1

Lesson No. 248

Text Pages 164

Lesson Topic: Adding and Subtracting Ten

Materials needed: Demonstration counting men, 30 objects (blocks, cutouts, etc.)

Purposes: To help pupils discover a method of adding and subtracting multiples of ten.

Procedures:

I. Prebook Activities

   A. Follow very closely the procedures that are suggested in teacher's edition page 164.

   B. Read the directions for the rest of the page and encourage pupils to proceed on their own.

Suggestions for the teacher:

Those who have difficulty may use counting men, a grid, or other manipulative aids.

Grade Level 1

Lesson No. 249

Text Pages 165

Lesson Topic: Adding and Subtracting Tens

Materials needed: Number line strip

Purposes: To strengthen the pupils' understanding of adding and subtracting multiples of ten.

Procedures:

I. Prebook Activities

A. Follow closely the procedures that are suggested in teacher's edition.

II. Using the Page

A. Read the directions aloud and encourage pupils to complete the entire page independently.

Suggestions for the teacher:

Pupils who have difficulty may use counting men or other manipulative aids or draw number lines or graph paper.

Grade Level 1

Lesson No. 250

Text Pages 166

Lesson Topic: Finding Sums

Materials needed: Demonstration counting men, 27 objects (blocks, cutouts and others)

Purposes: To help pupils develop deeper insight into the addition algorithm

Procedures:

I. Prebook Activities
   A. Follow step by step the procedures that are stated in teacher's edition.

II. Using the Page
   A. Read the directions aloud and focus attention on the first 3 panels.
   B. Check to see if each pupil has solved the equations correctly.
   C. Urge pupils to complete the page independently.

Suggestions for the teacher:
Pupils who have difficulty can represent the addition by using counting men or sets of objects.

Grade Level 1

Lesson No. 251

Text Pages 167

Lesson Topic: Finding Sums

Materials needed: 28 flannel board cutouts

Purposes: To help pupils develop deeper insight into the addition algorithm

Procedures:

I. Prebook Activities
   A. Follow very closely the suggestions that are presented under prebook activities.

II. Using the Page
   A. Read the directions aloud and relate the prebook activities to the first panel.
   B. Have pupils trace the dashed numerals in the first panel.
   C. Let pupils complete the page on their own.

Suggestions for the teacher:

Use the explanations as suggested in Mathematical Background.

Grade Level 1

Lesson No. 252

Text Pages 168

Lesson Topic: Finding Sums

Materials needed:

Purposes: To help pupils extend the use of addition algorism

Procedures:

I. Prebook activities
  A. Review the addition of 14 and 4.
  B. Urge pupils to participate in this activity.
  C. Follow closely the procedures that are suggested.

II. Using the Page
  A. Direct attention to panel one.
  B. Do the first exercise by showing each of the steps that are suggested in teacher's edition.
  C. Let pupils complete the page on their own.

Suggestions for the teacher:
Enrichment Activities:
See activity 12, part a through c on page vii.

Grade Level 1

Lesson No. 253

Text Pages 169

Lesson Topic: Subtraction

Materials needed: Demonstration counting men

Purposes: To help pupils develop deeper insight into the subtraction algorism

Procedures:

I. Prebook activities
   A. Follow closely the procedures that are suggested in teacher's edition.

II. Using the Page
   A. Direct attention to the sequence in panel 1.
   B. Discuss this activity fully with pupils.
   C. Read the directions for the rest of the page and have pupils proceed on their own.

Suggestions for the teacher:
Enrichment Activities:
Use Activity 12, part d on page VII.

Grade Level 1

Lesson No. 254

Text Pages 170

Lesson Topic: Subtracting Ten

Materials needed: Demonstration counting men

Purposes: To help pupils apply the subtraction alforism when subtracting ten

Procedures:

I. Prebook activities
   A. Follow step by step the prebook activities.

II. Using the Page
   A. Direct attention to the equation and the arrows above the number-line strip.
   B. Have pupils solve the equation by referring to the number-line.
   C. Give individual help where needed.

Suggestions for the teacher:

Enrichment Activities:

Use activity 12, parts 3 and f on page vii.

Grade Level 1

Lesson No. 255

Text Pages 171

Lesson Topic: Word Problems

Materials needed: Materials for dramatizing word problems

Purposes: To help pupils develop their ability in terpreting and solving word problems

Procedures:

I. Prebook Activities
   Follow the prebook activities very closely.

II. Using the Page
   A. Read the directions aloud and discuss the first problem.
   B. Read the problem aloud if necessary and follow the questioning procedure given above.

Suggestions for the teacher:
Pupils who have difficulty in reading the problem read for them so that they may relate it to the picture.

Grade Level 1

Lesson No. 256

Text Pages 172

Lesson Topic: Word Problems

Materials needed: 14 crayons, empty box

Purposes: To help pupils develop their ability to interpret and solve word problems

Procedures:

I. Prebook activities:
Follow closely the procedures that are suggested in teacher's edition.

II. Using the page:
   A. Read the directions aloud.
   B. Do the first problem as group activity and urge pupils to complete the page on their own.

Suggestions for the teacher:
Read the problems aloud for those pupils having difficulty.
Note: Mathematical Background

Grade Level 1

Lesson No. 257

Text Pages 173

Lesson Topic: Addition and Subtraction Practice

Materials needed: Demonstration counting men

Purposes: To help pupils increase their skills in addition and subtraction

Procedures:

I. Prebook Activities
  A. Write these algorism on the board:

$$\begin{array}{r} 12 \\ +\ 5 \\ \hline \end{array} \qquad \begin{array}{r} 15 \\ -\ 4 \\ \hline \end{array}$$

  B. Have different pupils demonstrate how number lines, and the addition table can be used.

II. Using the page
  A. Read the directions aloud and relate the prebook activities to the first exercise.
  B. Have pupils complete the page independently.

Suggestions for the teacher:
Pupils who have difficulty should use any of the method presented in prebook activities to help them find each sum or difference.

Grade Level 1

Lesson No. 258

Text Pages After page 173

Lesson Topic: Review 30

Materials needed: Copies of the review

Purposes: To review and check learning of addition and subtraction beyond ten

Procedures:

I. Pass a copy to each pupil.

II. Read directions together and work independently. Watch signs!

III. Pass in papers to be checked.

IV. Evaluate for future planning.

Suggestions for the teacher:
This review may also be considered as extra practice, if needed.

Review 30 Name ______________________

After page 164 of Sets • Numbers • Numerals 1

Add or subtract.

40 + 30	40 + 40	20 + 30	70 + 10	50 + 40
70 − 30	80 − 40	50 − 30	80 − 10	90 − 40
34 + 3	54 + 4	72 + 3	67 + 1	85 + 4
95 − 2	28 − 1	43 − 3	16 − 2	79 − 3
57 + 0	57 − 0	57 − 57	81 + 8	88 + 1

Grade Level 1

Lesson No. 259

Text Pages 174

Lesson Topic: Checkup Time

Materials needed: None

Purposes. To provide pupils an opportunity to review the concepts of this unit and evaluate their understanding of these concepts

Procedures:

Using the Page

Read the directions aloud, calling particular attention to the fact that both addition and subtraction exercises are included and that pupils must be alert to watch for the + and - signs.

Pupils should complete the entire page independently.

Suggestions for the teacher:

Grade Level 1

Lesson No. 260

Text Pages After page 174

Lesson Topic: Test 7

Materials needed: Test copies for each pupil to be tested

Purposes: To evaluate concepts of Unit 10 - (Addition and subtraction beyond ten)

Procedures:

I. Pass out a copy of the test to each pupil.

II. Explain carefully and then have pupils work independently.

III. Check papers and evaluate results.

Suggestions for the teacher:
Evaluation will determine plans for review or reteaching as needed.

Independent Test 7

Name____________________________

For pages 1[illegible]146 of Sets • Numbers • Numerals 1.

Write 4 sentences for each set of numerals. You may use the = sign and either + or −.

{5, 8, 13} {6, 10, 16} {50, 20, 30}

Add or subtract.

5	8	6	15	32
+9	+3	+7	+4	+6
16	12	14	15	17
−9	−5	−8	−5	−3
40	69	81	90	57
+20	−7	+6	−50	−10

Read each problem. Write an equation. Find the answer.

Jack had 12 goldfish.
Then 2 of them died.

He had ____ goldfish left.

____

Sue had 24 pennies.
Father gave her 5 more pennies.

Now she has ____ pennies.

____

Ann picked 4 tulips.
Then she picked 9 pansies.

She picked ____ flowers in all.

____

Bill had 34 nails.
He used 10 of them.

He has ____ nails left.

____

Grade Level 1

Lesson No. 261

Text Pages 175

Lesson Topic: Money - Dime

Materials needed: Real or toy money (pennies, nickels, dimes)

Purposes: To help pupils determine the value of combinations of pennies, nickels, or dimes

Procedures:

I. Prebook Activities
   A. Follow the prebook activities very closely.

II. Using the Page
   A. Direct attention to the top panel and emphasize that each set of coins has the same value.
   B. Read the directions for the rest of the page and encourage pupils to work independently.

Suggestions for the teacher:

Enrichment Activities:

Display a toy with a price tag labeled 15¢. Have pupils discover all possible combinations of pennies, nickels, and dimes that may be used to pay for the toy.

Grade Level 1

Lesson No. 262

Text Pages 176

Lesson Topic: Using Money

Materials needed: Real or toy coins (pennies, nickels, dimes) objects and price tags marked as money

Purposes: To provide pupils with experiences in making change

Procedures:

I. Prebook Activities
   A. Set up some life-like situations of buying something that involves making change.
   B. Proceed with activities as suggested.

II. Using the Page
   A. Read the directions aloud.
   B. Do the first panel as a group activity and have pupils trace over the x to mark the change.

Suggestions for the teacher:

Note: Postbook, enrichment activities, and Mathematical Background on page 176 in Teachers' Edition.

Grade Level 1

Lesson No. 263

Text Pages 177

Lesson Topic: Telling Time - Hour

Materials needed: Large demonstration clock

Purposes: To help pupils tell time by the hour

Procedures:

I. Prebook Activities
   A. Follow closely the procedures that are suggested in teacher's edition page 177.

II. Using the Page
   A. Read aloud the directions for the first panel and complete it as a group activity.
   B. Repeat these directions of the page and have the pupils work independently.

Suggestions for the teacher:
Note: Mathematical Background
Pupils who have difficulty should be given individual help as needed, using the model clockface or demonstration clock.

Grade Level 1

Lesson No. 264

Text Pages 178

Lesson Topic: Telling Time - Half Hour

Materials needed: Demonstration clock

Purposes: To help pupils tell time by the half hour

Procedures:

I. Prebook Activities
   A. Follow the prebook activities very closely.

II. Using the Page
   A. Read the directions aloud and complete the first panel as a group activity.
   B. Repeat the directions for the rest of the page and have pupils work independently.

Suggestions for the teacher:

Pupils who have difficulty should use the demonstration clock under your direction and guidance.

Grade Level 1

Lesson No. 265

Text Pages 179

Lesson Topic: Telling Time

Materials needed: Demonstration clock

Purposes: To help pupils strengthen their ability to tell time by the hour and by the half hour

Procedures:

I. Prebook Activities
   A. Indicate a given time, either hour or half hour, on the board.
   B. Let pupils set the clock to show this particular time.

II. Using the Page
   A. Read aloud the directions for the page.
   B. Caution the pupils to draw the hands of such length that the longer and shorter hands are easily distinguishable.
   C. Let the pupils do this page as individual activity.

Suggestions for the teacher:

Enrichment Activities:

Explain that a 12-hour clock is not the best measuring instrument for a 24-hour day. Explain noon and midnight and make clear that there are 12 hours between the two.

Grade Level 1

Lesson No. 266

Text Pages After page 179

Lesson Topic: Review 31

Materials needed: Copies of review 31

Purposes: To review time - hour and half-hour

Procedures:

I. Distribute a copy of the review to each pupil.

II. Read directions and have pupils work independently. Caution pupils to draw the hands of such lengths that the longer and shorter hands are easily distinguishable.

III. Collect papers and diagnose results.

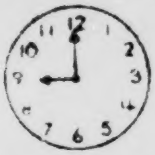
Suggestions for the teacher:
Diagnosis will indicate any need for reteaching and added review activities.

Review 31

179 Rev[illegible] ed[illegible] **Name** ____________________

Use after page ~~[illegible]~~ of Sets • Numbers • Numerals 1.

Write the numeral for the time shown on each clockface.



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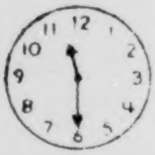

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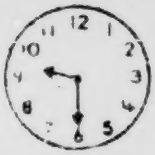

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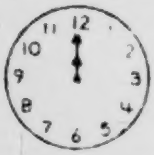

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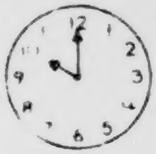

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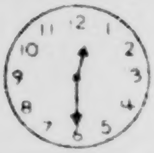
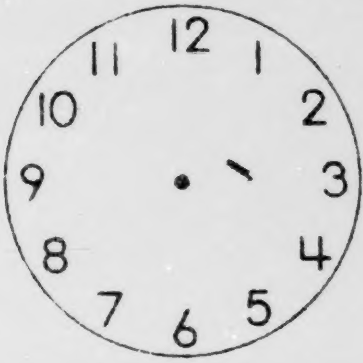


____ : ____

Draw hands on each clockface to show the correct time.



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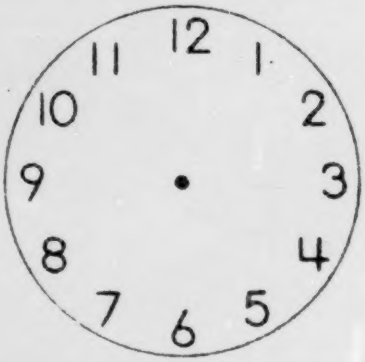
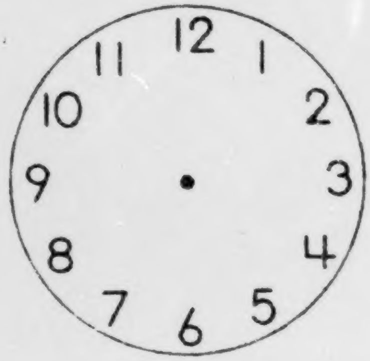


7:30

1:30



2:00

Grade Level 1

Lesson No. 267

Text Pages 180

Lesson Topic: Geometric Figures

Materials needed: Rulers, one for each pupil

Purposes: To help pupils develop skill in recognizing simple geometric figures as parts of more complex figures

Procedures:

I. Prebook Activities
   A. Follow closely the procedures that are suggested in teacher's edition page 180.

II. Using the Page
   A. Read aloud the directions in the first panel.
   B. Discuss the relationships between squares and rectangles, and have pupils mark an x in each square.
   C. Check pupils' work closely.
   D. Give individual help where needed.
   E. Have pupils complete the last panels on their own.

Suggestions for the teacher:

Note Mathematical Background

Pupils who have difficulty may trace each kind of simple closed figures with a different colored crayon. Then count the number of each kind of figure in each drawing.

Grade Level 1

Lesson No. 268

Text Pages 181

Lesson Topic: Geometric Figures

Materials needed: Colored chalk

Purposes: To help pupils strengthen their skill in recognizing simple geometric figures as parts of more complex figures

Procedures:

I. Prebook Activities
   A. Follow very closely the procedures that are suggested under prebook activities in teacher's edition page 181.

II. Using the Page
   A. Read the directions aloud and direct attention to the first panel.
   B. Check each pupil's page. Give individual help where needed.
   C. Let the pupils complete the rest of the page independently.

Suggestions for the teacher:
Enrichment Activities
Use activity 13 on page vii.

Grade Level 1

Lesson No. 269

Text Pages 182

Lesson Topic: Patterns with Geometric Figures

Materials needed: Cutouts of □ 's, ○ 's, and △ 's

Purposes: To help pupils in recognizing sequential patterns of geometric figures

Procedures:

I. Prebook Activities
   - A. Follow the prebook activities very closely.

II. Using the Page
   - A. Read directions aloud.
   - B. Discuss story and have pupils trace dashed lines and color the shapes accordingly.
   - C. Let pupils finish the rest of lesson on their own.

Suggestions for the teacher:

Note: Mathematical Background on page 182.

Grade Level 1

Lesson No. 270

Text Pages 183

Lesson Topic: Number Sequences

Materials needed:

Purposes: To help pupils discover the pattern of an increasing number sequence and to count it.

Procedures:

I. Prebook Activities
   A. Follow the prebook activities very closely.

II. Using the Page
   A. Read directions aloud.
   B. Discuss story and help pupils discover that 2, 3, 4, or 5 is added to any term to get to the next term in the number sequence.
   C. Have pupils complete page on their own.

Suggestions for the teacher:
Note: Mathematical Background on page 183.

Grade Level 1

Lesson No. 271

Text Pages 184

Lesson Topic: Number Sequences

Materials needed:

Purposes: To help pupils discover the pattern of a decreasing number sequence and to continue it.

Procedures:

I. Prebook Activities
   A. Follow the prebook activities very closely.

II. Using the Page
   A. Read directions aloud.
   B. Discuss the story and have pupils describe the pattern for the first exercise. (2 less, minus 2, subtract 2 each time, etc.)

Suggestions for the teacher:
Note: Postbook Activities and Mathematical Background on page 184.

Grade Level 1

Lesson No. 272

Text Pages 185

Lesson Topic: Number Sequences

Materials needed:

Purposes: To help pupils extend their understanding of number sequences

Procedures:

I. Prebook Activities
   A. Follow the prebook activities very closely.

II. Using the Page
   A. Read the directions aloud and discuss in detail the two sequences given in final panel.
   B. Read aloud directions again and have pupils complete the last panel on their own.

Suggestions for the teacher:

Note: Postbook Activities and Mathematical Background page 185.

Grade Level 1

Lesson No. 273

Text Pages 186

Lesson Topic: Number Sequences

Materials needed:

Purposes: To help pupils discover that every term of a sequence must follow the generating pattern

Procedures:

I. Prebook Activities
   A. Tell the pupils that you are going to make a difficult number sequence and challenge them to discover the pattern as you write on the board.

II. Using the page
   A. Read the directions aloud.
   B. Correct the first sequence as a group activity.
   C. Check closely to see if pupils know exactly what they are expected to do in each sequence.
   D. Encourage pupils to complete the page independently.

Suggestions for the teacher:

Enrichment Activities:

Copy, on the board, the sequence of triangular numbers described in the Mathematical Background.

Help pupils discover the generating pattern of the sequence.

Use activity 16 on page viii.

Grade Level 1

Lesson No. 274

Text Pages After page 186

Lesson Topic: Review 32

Materials needed: Copies of the review for each pupil

Purposes: To review geometric figures and number patterns

Procedures:

I. Follow usual procedures for the review and tests.

II. Check and evaluate results.

Suggestions for the teacher:
Evaluation will direct plans for going on to other concepts or for further review or reteaching.

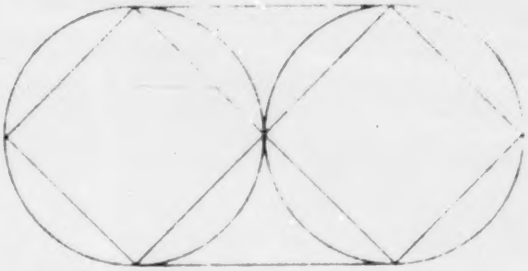
Review 32 **Name** ____________________

after page ~~155~~ of Sets • Numbers • Numerals 1

Write a numeral to tell how many figures of each kind.

___ rectangles

___ squares

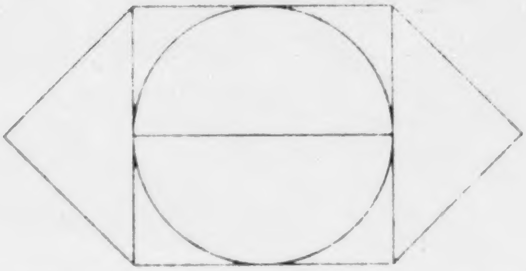


___ triangles

___ circles

___ rectangles

___ squares



___ triangles

___ circles

Draw the next three figures.

△ □ □ △ □ □ ___ ___ ___

◇ ○ ○ △ ◇ ○ ○ △ ___ ___ ___

Write the next three numerals.

2, 4, 6, 8, 10, ___, ___, ___

94, 93, 92, 91, ___, ___, ___

7, 8, 10, 13, 17, ___, ___, ___

Grade Level 1

Lesson No. 275

Text Pages 187

Lesson Topic: Finding Sums

Materials needed: 15 flannel board cutouts

Purposes: To help pupils discover how the "tens pattern" may be used to simplify the addition of three numbers

Procedures:

I. Prebook Activities
  A. Follow closely the procedures that are suggested in Teacher's Edition on page 187.

II. Using the Page
  A. Read aloud the directions for the first panel and relate the prebook activities to these exercises.
  B. Emphasize the importance of choosing numbers to form an addend of ten to make the addition easier.
  C. Check pupils' work closely.

Suggestions for the teacher:

Enrichment Activities:

Use activity 9 on page vi.

Pupils who have difficulty should draw dashed lines between numerals that name ten, as shown in Mathematical Background.

Grade Level 1

Lesson No. 276

Text Pages 188

Lesson Topic: Finding Sums

Materials needed:

Purposes: To help pupils discover how to use the associative property of addition when finding the sum of four cutouts.

Procedures:

I. Prebook Activities
   A. Follow step by step the procedures that are suggested in teacher's edition page 188.
   B. Encourage each pupil to participate in the class activity.

II. Teaching the Page
   A. Read the directions for panel one aloud.
   B. Discuss the additions by relating them to the prebook activities.
   C. Give individual help where needed.
   D. Have pupils complete the page on their own.

Suggestions for the teacher:

Pupils who have difficulty may use any convenient manipulative aids in conjunction with the algorisms.

Grade Level 1

Lesson No. 277

Text Pages 189

Lesson Topic: Magic Squares

Materials needed:

Purposes: To provide pupils with practice in a novel and attractive form

Procedures:

I. Prebook Activities
   A. Draw a 3 by 3 grid on the board.
   B. Write 0, 1, 2, 3, 4, 5, 6, 7, and 8 above the grid.
   C. Continue to follow the suggestions that are listed in the teacher's edition.

II. Teaching the Page
   A. Read the directions aloud.
   B. Follow step by step the procedures in teacher's edition page 189.
   C. Give individual help where needed.
   D. Check pupils' work.

Suggestions for the teacher:
Pupils who have difficulty may use sets of objects, the counting men, or other manipulative objects to help them find each sum.

Grade Level 1

Lesson No. 278

Text Pages 190

Lesson Topic: Naming Numbers

Materials needed:

Purposes: To help pupils extend their concept of many names for a number

Procedures:

I. Prebook Activities
   - A. Write 1 + 2 + 3 on the board; ask what number is named by this expression.
   - B. Start interchanging the numerals (1 + 3 + 2, 2 + 1 + 3, 3 + 1 + 2, 3 + 2 + 1 and ask the same question for each expression.

II. Teaching the Page
   - A. Discuss the directions and the rules of the "game" carefully using illustrations if necessary.
   - B. Urge pupils to complete the page independently.

Suggestions for the teacher:

Pupils who have difficulty should be given individual help.

Grade Level 1

Lesson No. 279

Text Pages 191

Lesson Topic: Practice with Sequences and Finding Sums

Materials needed:

Purposes: To strengthen pupils' skill in recognizing number sequences and in finding the sum of three or four numbers

Procedures:

I. Prebook Activities
   - A. Review with pupils the various kinds of number sequences.
   - B. Have pupils give several illustrations of each type of number sequence.

II. Teaching the Page
   - A. Read the directions aloud.
   - B. Follow closely the procedures that are suggested in teacher's edition page 191.

Suggestions for the teacher:

Pupils who have difficulty should use the arrow technique in panel one. In panel two they should draw dashed lines to show tens.

Grade Level 1

Lesson No. 280

Text Pages 192

Lesson Topic: Checkup Time

Materials needed:

Purposes: To provide pupils an opportunity to review and to evaluate the concepts developed in this unit

Procedures:

I. Using the Page
   - A. Read aloud the directions for the first two panels.
   - B. Allow pupils a reasonable amount of time to complete these panels before proceeding to the third panel.
   - C. Check pupils' work closely and have them complete the page independently.

Suggestions for the teacher:

Do any necessary review and reteaching if needed before giving the independent test, page 175-192.

Grade Level 1

Lesson No. 281

Text Pages 192

Lesson Topic: Test 8

Materials needed: Copies of test 8 for each pupil

Purposes: To evaluate concepts of unit 11

Procedures:

Follow the usual procedures for all tests and reviews.

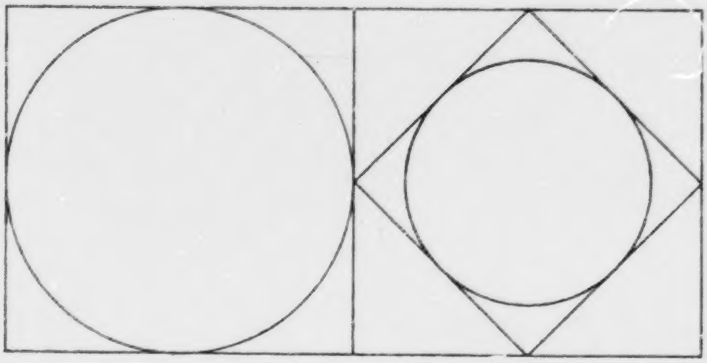
Suggestions for the teacher:

Provision should be made for any needed review, practice or reteaching as test scores indicate.

Independent Test 8 Name____________________

For pages 152-160 of Sets • Numbers • Numerals 1.

Write a numeral to tell the number of each kind of figure.



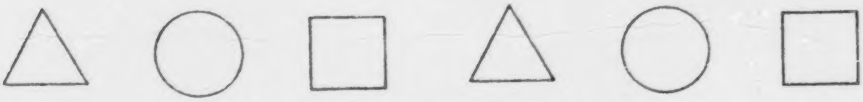
____ squares

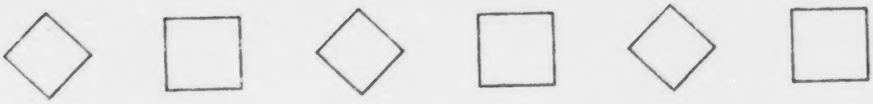
____ rectangles

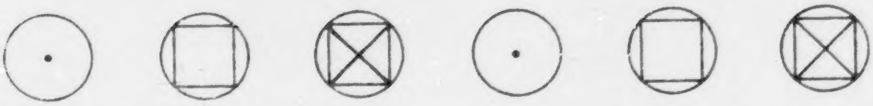
____ circles

____ triangles

Discover the pattern. Draw the next three figures.







Discover the pattern. Name the next three numbers.

0, 2, 4, 6, 8, ____, ____, ____

5, 7, 9, 11, 13, ____, ____, ____

5, 10, 15, 20, 25, ____, ____, ____

23, 21, 19, 17, 15, ____, ____, ____

1, 3, 6, 10, 15, ____, ____, ____

Add in the easiest way.

3	5	6	5	8	7
4	2	4	9	1	5
7	5	1	1	2	5
+2	+8	+9	+3	+6	+3